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THESIS

**ANALYSIS OF CIVILIAN EMPLOYEE
ATTRITION AT THE NAVAL POSTGRADUATE
SCHOOL AND NAVAL SUPPORT ACTIVITY-
MONTEREY BAY**

by

Xavier F. Valverde

March, 1997

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MONTEREY BAY**

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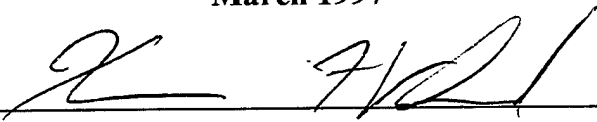
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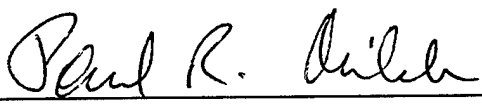
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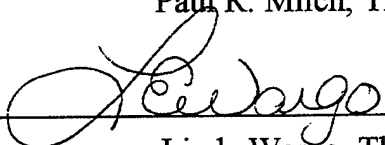
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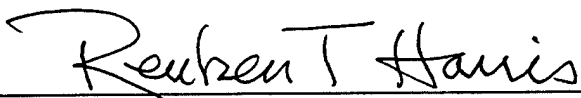
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ABSTRACT

The purpose of this thesis is to assist management at the Naval Postgraduate School (NPS) and Naval Support Activity-Monterey Bay (NSA-MB) to determine what civilian non-faculty employee jobs are likely to be left vacant in the next three years due to attrition and to identify what training and skills will be needed by personnel whose jobs may be eliminated in order to be transferred to jobs left vacant due to attrition. The research methods include forecasting and work-analysis. The data were obtained from the Defense Civilian Personnel Data System files for fiscal years 1989 to 1996. The results show ten jobs, based on average number of accessions, attrition rates, forecasted vacancies, and qualification similarities, that may be left vacant to receive transferred personnel. The results also show that the training needed to effectively transfer personnel will be minimal and can be provided at local technical/vocational schools for those working in Clerical and Administrative positions and at NPS for those working in Administrative and Managerial positions. Because of job specialization and low attrition rates, Firefighters, Police Officers, Heavy Mobile Equipment Mechanics, and Automotive Mechanics will need much more training if they are to be transferred to other jobs at NPS and NSA-MB. It is recommended that management intervene to change hiring practices to increase future vacancies in jobs whose vacancies may not be sufficient enough in number or may not appear quickly enough to receive personnel. Three scenarios using the forecasting model are presented to provide alternative methods of increasing those vacancies.

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I. INTRODUCTION

A. BACKGROUND

As the Department of Defense continues to get a smaller piece of the national budget pie, it is logical to assume that the Naval Postgraduate School (NPS) and Naval Support Activity-Monterey Bay (NSA-MB) will not see the increases in future annual budgets similar to those in the past. In fact, the budget for NPS and NSA-MB for fiscal year 1997 decreased by more than \$2.5 million. [Ref. 1] Consequently, management has been charged with the task of identifying and proposing methods of cutting costs.

Action is already in progress, navy-wide and locally, to increase efficiency and seek further cost-savings. A recent message from the Chief of Naval Operations (CNO) instructs base commanders, including NPS/NSA-MB, to initiate outsourcing competitions for various functions. [Ref. 2] These competitions might be implemented as soon as fiscal year 1998. Locally, advances in technology in areas such as data processing and supply management will likely result in elimination of certain jobs. These actions indicate a move toward cutting costs through the reduction of labor costs.

Between fiscal years 1990 and 1996, labor costs for NPS support, NSA-MB, and staff have accounted for 31% to 37% of the Operation and Maintenance, Navy (OMN) budget. For fiscal

year 1997, it is estimated that the same labor costs will be \$20.3 million. [Ref. 1] Management at NPS and NSA-MB agree that the size of the civilian labor force must be reduced, whether it is through a Reduction in Force (RIF), outsourcing, attrition, or any combination of these. Regardless of the method or methods used, attrition must play a role and it is this role that will be explored in this study.

B. THESIS OVERVIEW

The idea of looking at attrition as the primary method of controlling the size of the workforce resulted from conversations with the Human Resources Office (HRO), NPS/NSA-MB, and the Associate Provost for Innovation.

The main objective of this study is to provide managers at NPS and NSA-MB with:

- An objective analysis of civilian employee attrition.
- A forecast of stocks based on future attrition if past trends continue.
- A determination of which job billets are likely to be left vacant due to attrition in the next three years.
- Suggestions on what training and skills will be needed to effectively transfer personnel whose jobs are eliminated to jobs left vacant due to attrition.

C. RESEARCH QUESTIONS AND SCOPE

Two major questions are addressed in this study:

- What civilian non-faculty employee jobs are likely to be left vacant in the next three years due to attrition?
- What training and skills are needed for those personnel whose jobs are eliminated so that they can be transferred to those jobs left vacant due to attrition?

This study explores the option of reducing labor costs by controlling the size of the workforce using an attrition model. The actual savings in labor costs by reducing the size of the workforce is not addressed. The model will be formulated using historical data from the Defense Civilian Personnel Data System (DCPDS) for fiscal years 1989 to 1996. Historical data will include employees' entry dates, attrition dates, and job series¹.

Although it is difficult to accurately predict what jobs will be eliminated in the next three years, current plans for implementation of technological advances, functions being considered for outsourcing at NPS, NSA-MB, and other commands, factual information, and informed speculation will be considered.

The term "employees" includes civilian personnel

¹Job series is a four digit number used to identify and classify a particular job description.

regardless of any prior military experience or military reserve status. Included are personnel attached to NSA-MB or staffs in support of NSA-MB. Permanent and temporary employees are treated the same. Only non-faculty NPS personnel are included in the study, since NPS faculty as well as part-time student employees are specifically excluded.

Various sources will be used to identify the training and skills needed to effectively transfer personnel whose jobs are eliminated to jobs left vacant due to attrition. These sources include the Position-Classification Standards (TS-119), the Qualification Standards for General Schedule Positions, and the Handbook of Occupational Groups and Series. These books delineate job descriptions, prerequisites, education, and training requirements for each job series. Recommendations made in the HRO and by other sources will also be examined to compare and identify the training and skills needed.

The thesis is organized into five chapters. Chapter I provides an introduction to the research area. The second chapter presents a review of the literature of attrition, attrition patterns, and forecasting. Chapter III discusses the data used in the thesis and the methods employed to analyze the data. The fourth chapter provides an analysis and interpretation of the data, the forecasting of stocks,

forecasting scenarios, and a discussion of various job comparisons. Chapter V contains conclusions and recommendations.

II. CONCEPTS AND LITERATURE REVIEW

A. GENERAL

Forecasting attrition is an important aspect in planning for future needs, but it is just a small function of any organization's planning process. As such, it is necessary to have an insight of how forecasting fits into the planning process and an understanding of several related concepts. This chapter discusses relevant literature to provide a working knowledge of forecasting's use in organizational planning, the forecasting process, and factors which influence forecasting. It will also provide a brief discussion of work-analysis, another function which will be essential in comparing jobs and developing a training and skills plan.

B. PLANNING

Strategic business planning is the process of setting organizational objectives and deciding on how to achieve these objectives. Operational planning, a level of strategic planning, deals with, among other things, the resources required for and the organizational structure of an organization. Human resources planning is a subset of operational planning and is, as Alpander [Ref. 3] states, "a systematic process of managing the acquisition, utilization, and disposition of personnel in order to attain the objectives

of the organization . . . " Human resources planning, also known as manpower planning, stresses the idea that an organization ought to have an idea of what its manpower needs are and what they will be in the future. It is this issue that leads to one of many tools used for human resources planning.

C. FORECASTING

1. Purpose

Forecasting is a technique used to estimate future manpower requirements in an organization. It is necessary in any realistic planning of future human resources management actions. It is a process by which planners can make rational decisions in anticipation of future problems. As many sources point out, forecasting is an applied art, often informal, highly judgmental, and subjective. [Ref. 3 and Ref. 5] Regardless, necessary in both the corporate world and the military, it is used by Chief Information Officers and Military Planners, respectively, to help measure efficiency of the organization and to link manpower needs with the organization's strategic plan.

2. Process

An understanding of the forecasting process requires a discussion of the steps needed to conduct the process, the concept of segmentation, and the inventory of personnel needed

to begin forecasting.

a. Steps

According to Walker [Ref. 4], the process of forecasting for an organization requires six steps:

- (1) Develop an understanding of the environmental and organizational conditions affecting future requirements.
- (2) Take inventory of the talent available within the organization.
- (3) Project the future available supply of talent in the organization.
- (4) Analyze the current human resource requirements.
- (5) Project future staffing requirements.
- (6) Forecast needs such as recruitment needs, training and development needs, and organizational adjustments.

Although all six steps are necessary for an effective human resource planning program, it is up to managers to determine the priority and emphasis each particular aspect of the process will receive. Since it is the budget decrease that initiated a look at labor costs at NPS, step (1) has already been taken for action by the HRO and the Naval Postgraduate School Executive Board (NEB). Step (4) is a continual process that is being conducted in the HRO. This study will attempt to perform steps (2), (3), (5), and (6).

b. Segmentation

Although a total workforce forecasting model can be constructed, projections can improve by focusing on certain segments of the workforce. This process is called segmentation and it allows an organization to be broken into smaller groups. The primary reason for segmentation is that people behave differently based on certain characteristics. By grouping people with similar characteristics such as occupation, age, race, salary grade, and length of employment, certain assumptions can be made as to the behavior of the group. The Schaefer Brewing Company segments their forecasts by the type of job concerned, such as production, marketing, and financing. [Ref. 6] In this case, it is assumed that personnel in the production department behave similarly to each other with regard to their employment patterns, yet behave differently from those personnel in the marketing and financing departments. In another case, the Navy Personnel Research and Development Center segmented their forecast groups of civilian personnel by race. [Ref. 7] This study concluded that the attrition rate for Hispanic blue-collar workers was much higher than those for whites and other minorities.

c. Inventory

A complete personnel data system is needed to effectively compile information into useful categories. Data may include age, sex, citizenship, race, educational attainment, date of hire, employment status, and salary grade. Effective tracking of this and other information assists human resources planning and is especially useful in analyzing retention, attrition, transfers, and performance. Examples of such data systems include the Defense Manpower Data Center (DMDC) which serves the Department of Defense (DoD), the Air Force Personnel Data System (AFPDS) which tracks progression of its officers, and DCPDS which provides information on civilian personnel employed by DoD.

D. FACTORS INFLUENCING THE FORECAST MODEL

Many analyses have resulted in documentation of important generalizations regarding attrition. Alpander [Ref. 3] and Bartholomew [Ref. 8] indicate attrition rates generally decrease as the length of service increases, decrease as job skill requirements increase, and are usually higher among women than men. Factors influencing these rates can be organizational such as lack of job security or competitive such as better paying jobs elsewhere. Although these generalizations provide a basis for forecasting, the uniqueness of each organization must also be taken into

consideration. In this study, such factors as base closures, federal employment, past job security, retirement plans, the educational environment, and the military organization itself are some of the characteristics that make NPS and NSA-MB different from other shore commands and corporate organizations.

In spite of an organization's uniqueness, all managers must remain aware that forecast models do not necessarily predict the future. Rather, forecast models provide a view of what may happen in the future if past trends in recruitment, promotion, and attrition continue. Managers can control recruitment, promotion, and attrition due to resignation, RIF's, and poor job performance to a certain extent. However, voluntary attrition, such as those due to geographic moves, illness, and death, can neither be predicted nor managed. Only the areas within the control of an organization can be used to decrease, increase, or maintain the size of the workforce. Once management decides what it would like the future of the organization to look like, it can then use the forecast model to develop various scenarios on how to best reach its desired workforce size.

E. WORK-ANALYSIS

Any objective human resource planning requires an understanding of job content and job requirements. In this

thesis, work-analysis is the method that will be used to achieve this understanding of the jobs that may be eliminated at NPS and NSA-MB and those predicted to be left vacant upon completion of the forecasting process. Walker [Ref. 4] states work-analysis is the process of gathering and examining information on principle work activities in a position and qualifications, such as knowledge, skills, and abilities (KSA's), necessary to perform these activities. Work-analysis is used, among other things, to identify training and development needs for employees at all levels of an organization. Various techniques exist for the analysis of these needs including the description method, observation, functional analysis, and questionnaires. The technique used depends on the specific situation of the organization. As a rule, the technique used should be simple and should not gather more data than is necessary.

F. SUMMARY

The literature used in this study shows processes and techniques necessary to plan for future human resources needs. Budget cuts and technological advances have been identified as potential problems, and it is this study's intent to use the processes and techniques described in the aforementioned literature to assist NPS and NSA-MB in planning for their future needs. The strategic plan at NPS calls for increasing

efficiency and effectiveness and retaining a high quality workforce [Ref. 9]. The decreasing budget makes it difficult to predict what the size of the workforce at NPS and NSA-MB will look like in the next three years. However, managers are aware of two factors that will influence the size of the workforce. These same factors, which will also influence the forecast model, are: (1) The negative impact on the labor supply due to decreased financial resources; and (2) The increased efficiency through technology and administrative changes that will increase labor productivity and, in turn, reduce manpower requirements.

III. DATA COLLECTION, MODEL FORMULATION, AND METHODOLOGY

A. DATA

1. Data Files

The data for this study were obtained from the DCPDS via the HRO. HRO maintains two data files. One file contains information regarding employment including names, series, grade, and employment status such as leave without pay, and status such as permanent, part-time, or temporary. This file is updated monthly and has information beginning in July 1988. The second file contains monthly information regarding accessions and attrition including names, series, grades, and dates of accession or attrition. Both files are maintained on all civilian employees of NPS, NSA-MB, and other tenant commands.

Data used in this thesis were restricted to civilian non-faculty employees of NPS and NSA-MB. Part time workers were not included. No distinction was made between temporary and permanent employees, since temporary employment can be as long as three years depending on the time needed to complete special projects. Data from fiscal years 1989 through 1996 were used in the study. Although data for fiscal year 1997

first quarter were available, they were not used in the model so that the number of quarters in each fiscal year would be all the same.

2. Data Collection

There are more than 130 job series and in fiscal year 1989 there were, on the average, 589 personnel employed (see Figure 1.). Although the number of personnel employed has almost steadily increased through fiscal year 1996, the relatively small number of employees by series presented a

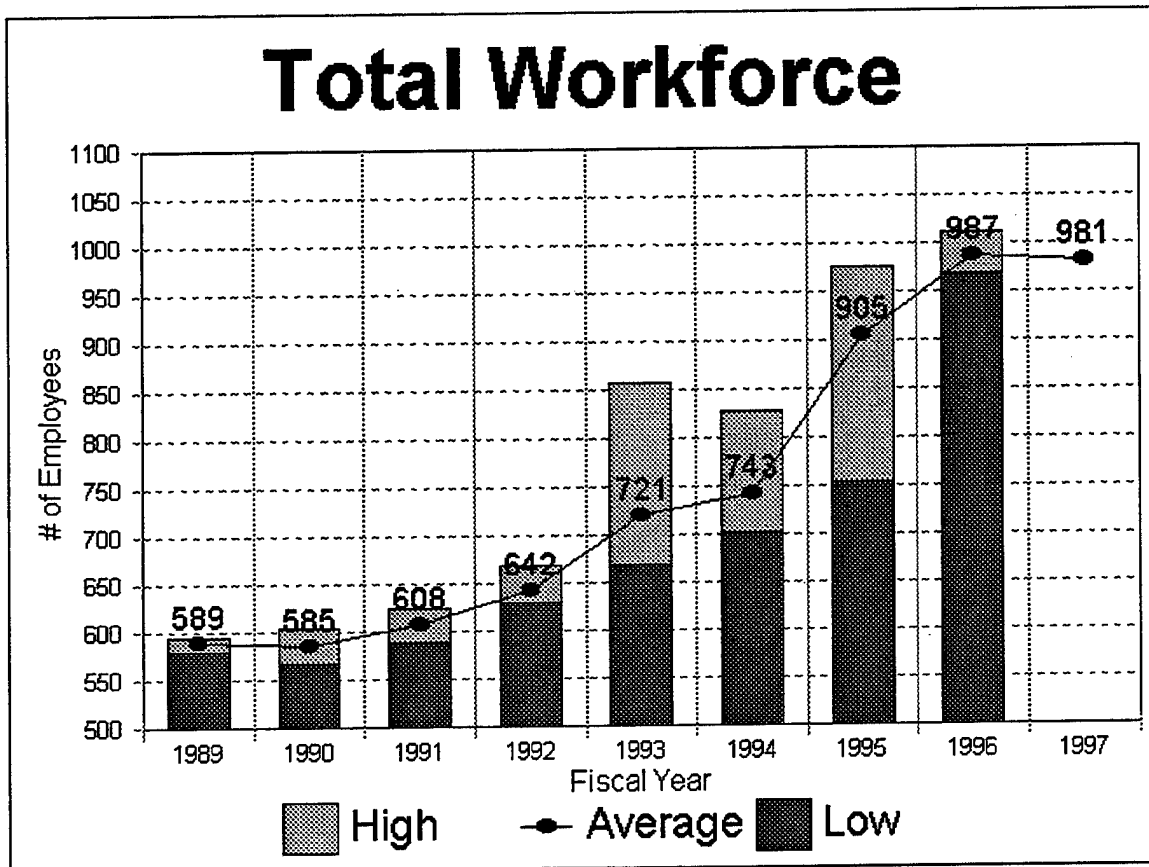


Figure 1. Total civilian non-faculty workforce for QTR 1 FY 1989 - QTR 1 FY 1997.

potential problem. The number of employees by series ranged from zero to 41. These small numbers would likely cause undue fluctuations in the attrition rate estimates and would adversely affect the forecasting effort. To overcome this problem, similar series were combined into groups for a total of twelve groups. The case of the Financial group series is shown as an example in Table 1. These groups were created based on job similarities, characteristics, and general area of job skill requirements.

Job Series	STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Stock
O5O1	6	6	8	9	10	10	9	9	67	8.38
O5O3	4	1	4	3	0	0	1	0	13	1.63
O5O5	1	1	2	2	2	2	2	3	15	1.88
O51O	0	0	0	0	0	0	1	2	3	0.38
O525	18	18	22	20	24	30	30	31	193	24.13
O544	0	0	0	0	1	1	0	1	3	0.38
O56O	2	3	0	1	3	1	2	2	14	1.75
O561	2	0	1	1	1	2	1	7	15	1.88
Total	33	29	37	36	41	46	46	55	323	40.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Stock
O5O1	6	6	8	9	10	9	9	12	69	8.63
O5O3	2	2	4	3	0	1	0	0	12	1.5
O5O5	1	1	2	2	2	2	2	2	14	1.75
O51O	0	0	0	0	0	0	1	2	3	0.38
O525	17	19	23	20	23	27	31	34	194	24.25
O544	0	0	0	0	1	1	0	1	3	0.38
O56O	3	3	0	1	2	2	2	2	15	1.88
O561	2	1	1	1	2	1	5	6	19	2.38
Total	31	32	38	36	40	43	50	59	329	41.13

Table 1. Quarterly stock for Financial group in quarters 1 and 2.

Certain series such as 0301, 0303, 0305, 0318, and 0326 were not included in any group for various reasons. Mail Clerks, series 0305, is not similar to any other series. Since the stock of series 0305 was no bigger than seven in any one quarter, a small number such as this precluded any forecasting with a high enough degree of confidence.

Secretaries, series 0318, is an occupation whose stocks have decreased since FY 1989. It is this researcher's belief that the need for secretaries is decreasing due to increased efficiency through the use of the computer and the decreased use of the typewriter. Additionally, it is probable that secretaries have been replaced by other series such as Office Automation Assistants and Administrative Assistants.

Office Automation, series 0326, is a series that appears for the first time in the 4th Quarter of FY 1993 and has continued to increase through FY 1996. Since data for this series are available only for four years and stock levels are likely to still increase in the future, this series cannot be forecasted with a high enough degree of confidence.

Series 0301 and 0303 consist of jobs too dissimilar to be included with any other group. Series 0301 consists of a variety of jobs including Total Quality Leadership Specialists, Audio-Visual Specialists, Director of Admissions, and others. Series 0303 consists of jobs ranging from

Administrative Support Assistants to Family Advocacy Assistants. Breaking the job series into sub-groups would have resulted in sub-groups whose numbers would have been too small to forecast with a reliable degree of confidence.

Although series 0301, 0303, 0305, 0318, and 0326 are not included in the twelve groups, forecasts were still computed for them for the sake of completeness. However, it is not recommended that these forecasts be used. Appendix A shows the complete list of the twelve groups and the five ungrouped series mentioned above.

The closure of Fort Ord in 1993 resulted in the transfer of 198 employees of various job series to NPS and NSA-MB. Some personnel were simply hired by NPS and NSA-MB, while others were transferred when duties and responsibilities, such as maintenance and firefighting, were assumed by NPS and NSA-MB. Most of these accessions occurred during the end of calendar year 1995. This sudden employment increase was not characteristic of normal hiring practices. Since there was no indication, at the time of this study, of any future local base closures, these accessions were not included in the computation of average accessions. However, the employees thus acquired were kept a part of the employment stock as most of them remain employed at NPS and NSA-MB.

Although the combination of series helped alleviate the problem of small numbers of employees, further aggregation of the data was decided on. Monthly numbers of personnel were combined into quarterly numbers because forecasting on a quarterly basis was judged to be sufficient. Combining the numbers of personnel on a yearly basis was also considered, however, a look at the quarterly data revealed a higher number of attrites for Quarter 3 than for other quarters, and it seemed desirable to retain the ability to forecast quarterly. Since future managerial decisions regarding hiring would be based partly on quarterly employment trends, the employee stocks, attrition, and accession data were all processed on a quarterly basis of accounting. For each group of job series, three sets of data were formed. For the set of stock data, there are $8 \times 4 = 32$ quarterly stocks for fiscal years 1989 - 1996. The attrition and accession sets were processed the same way.

B. MODEL FORMULATION

1. Stocks

The term "stocks" refers to the number of employees at a particular point in time. Stocks were recorded at the beginning of quarters for a total of 32 quarters of FY's 1989 - 1996. Table 1 shows, for the Financial group series listed in the first column, the stock of employees at the beginning

of Quarter 1 or Quarter 2 of FY's 1989 - 1996. The last two columns contain the sum and the average stocks of all eight years for the respective quarter. Stocks for all groups and all quarters are listed in a similar way in Appendix B.

2. Attrites

The term "attrites" refers to the number of employees who leave the NPS or NSA-MB workforce during a period. Here, attrites were processed quarterly over the same quarters as stocks. Table 2 shows the number of attrites for the Financial

Job Series	ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Attrites
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	1	0	1	2	1	2	3	0	10	1.25
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	2	3	0	10	1.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Attrites
O501	0	0	0	0	0	0	1	1	2	0.25
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	0	2	3	0	0	1	0	0	6	0.75
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	0	0	0	1	1	0.13
Total	0	2	3	0	0	1	1	2	9	1.13

Table 2. Quarterly attrites for Financial group in quarters 1 and 2.

group in quarters 1 and 2 as an example. Attrites for all groups and all quarters are listed similarly in Appendix C.

3. Attrition Rate

The attrition rate is computed by dividing the total number of attrites during a quarter by the total number of employee stocks at the beginning of that quarter. For example, the Financial group had a total of two attrites during the first quarter of FY 1990. At the beginning of the same quarter, the corresponding stock was 16 people. The computation results in an attrition rate of 12.5% ($2/16$) for the first quarter of FY 1990.

However, for the purposes of forecasting the number of attrites in the future, an average quarterly rate of attrition was also computed. This average attrition rate was computed by dividing the sum of the number of quarterly attrites over the eight fiscal years by the sum of the number of stocks at the beginning of the same quarters. In the case of the Financial group, for Quarter 1, a total of 10 attrites divided by a total stock of 172 personnel results in an attrition rate of 5.81%, rounded to the nearest hundredth. The rates were computed for the other three quarters in the same way, as were for the other eleven groups of job series. The result is the average attrition rate for a particular quarter and particular group as shown in Table 3.

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
SAFETY, FIRE, & POLICE	3.08%	4.18%	3.77%	4.18%
HRO PERSONNEL	5.64%	2.78%	7.43%	4.60%
ADMINISTRATIVE	2.47%	4.88%	3.37%	1.10%
COMPUTER OPERATORS/SPECIALISTS	2.23%	4.21%	5.65%	7.54%
FINANCIAL	3.1%	2.74%	4.48%	4.18%
ENGINEERS/TECHNICIANS	3.23%	3.16%	2.92%	3.98%
PROCUREMENT/SUPPLY	5.1%	4.24%	3.17%	5.16%
PUBLIC WORKS/STAFF	3.64%	0.00%	3.33%	2.44%
SCIENCE/TECHNICAL	3.34%	2.82%	4.85%	4.69%
LIBRARY	4.12%	5.88%	3.85%	6.22%
EDUCATION/TRAINING	4.31%	2.05%	3.61%	3.16%
WAGE GRADE/SUPERVISORS	3.42%	2.92%	2.58%	2.02%

Table 3. Attrition rates for all twelve groups and for all quarters.

Although quarterly attrition rates will be used for forecasting, yearly attrition rates were also computed to give a general view of what the attrition rate was for the last eight years. Figure 2 shows graphically the yearly attrition

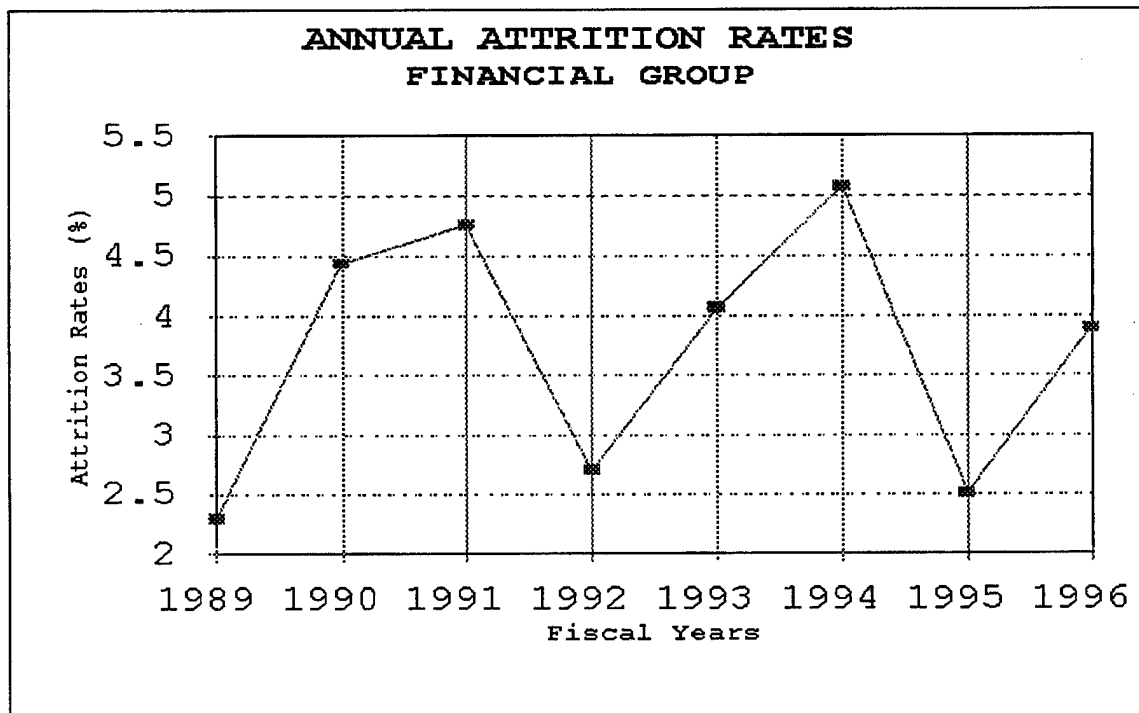


Figure 2. Annual attrition rates for the Financial group.

rates for the Financial group. Appendix D provides graphs of yearly attrition rates for all twelve groups.

4. Accessions

The term "accessions" refers to the number of civilians who join the NPS/NSA-MB workforce in a particular quarter. The average number of accessions was computed by summing the total number of accessions for all eight years for that particular quarter and dividing by eight. Table 4 shows accessions for the Financial group and Appendix E shows the accessions for all twelve groups.

Job Series	ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Accessions
O501	0	0	0	0	0	0	0	1	1	0.13
O503	0	1	0	0	0	0	0	0	1	0.13
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	1	0	1	3	1	2	0	2	10	1.25
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	1	1	0	0	0	0	2	0	4	0.5
Total	2	2	1	3	1	2	2	3	16	2
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Totals	Avg Accessions
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	2	1	4	2	1	2	1	0	13	1.63
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	1	0	0	0	1	0.13
Total	2	1	4	2	2	2	1	0	14	1.75

Table 4. Quarterly accessions for Financial group in quarters 1 and 2.

5. Forecasting

Forecasts are computed using the equation:

$$S_{k+1} = (1-W_k)*S_k + A_k \quad (3.1)$$

where:

S_{k+1} = number of employees forecasted for
the beginning of quarter $k+1$
= number of employees at the end of quarter k
 W_k = average attrition rate for quarter k
computed over the eight year period
 S_k = number of employees at the beginning of quarter k
 A_k = average number of civilians joining workforce during
quarter k computed over the last eight years
 k identifies the relevant quarter indicated by a
number 0 through 11

The forecasting was started with the beginning stock of Quarter 1 of FY 1997 ($k=0$). Equation 3.1 was then used to forecast stocks for the beginning of Quarter 2 of FY 1997. This process was continued for all quarters through Quarter 4 FY 1999 by simply increasing the value of k by one and using equation 3.1 repeatedly. Figure 3 shows the result of the twelve-quarter forecast for the Financial group. Similar graphical presentations of the quarterly forecasts for all twelve groups will be presented and reviewed in Chapter IV. Forecast of stocks for the five ungrouped series are shown in Appendix F.

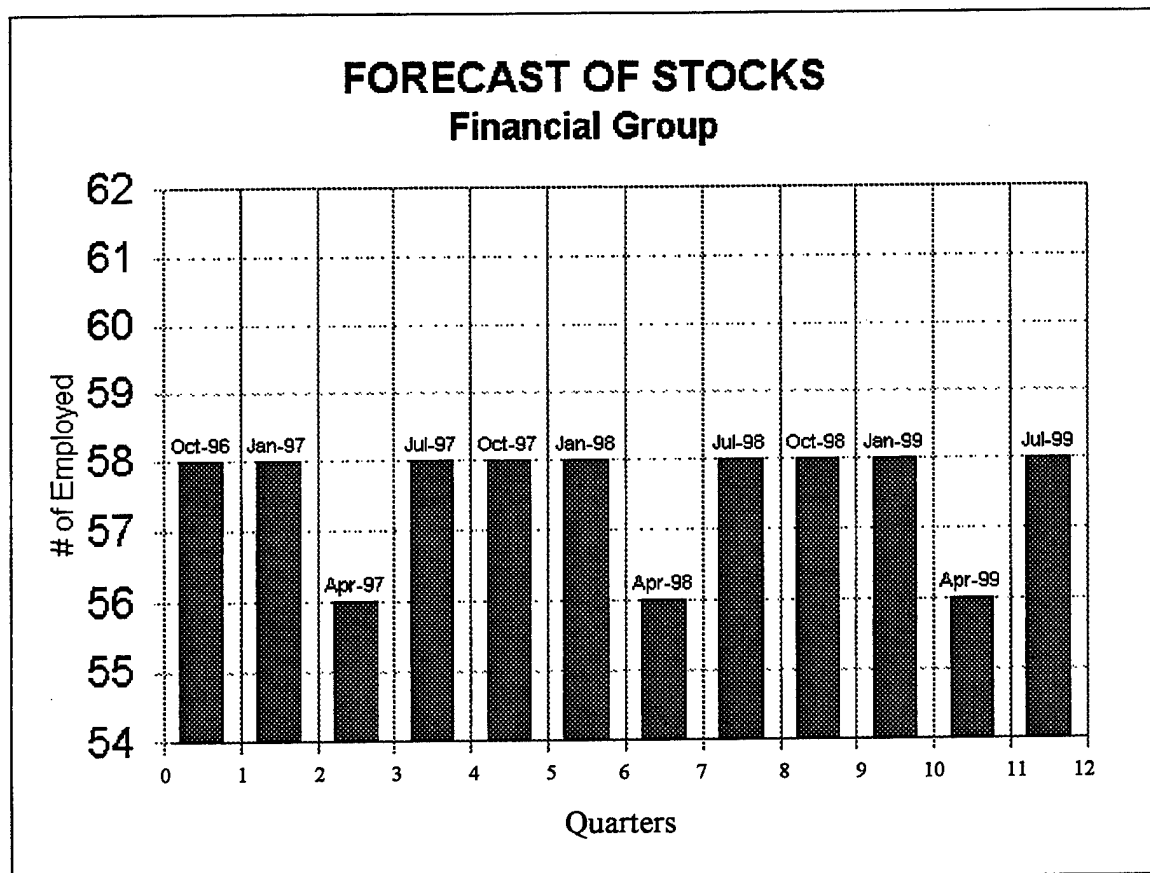


Figure 3. Forecast of stocks for Financial group.

C. METHODOLOGY

With the data collected and model formulated, the next step is to analyze the forecast. Although managers at NPS and NSA-MB can use the forecasts to make future decisions, they must also understand what happened in the past. Specifically, a knowledge of how the forecast is influenced by attrition and accession trends of the past is needed so that any past mistakes are not repeated. It is also important to point out past decisions that did work given the trend in attrition. The next chapter will highlight specifics of the interaction

of the stocks, attrites, and accessions. Using a specific group as an example, an attempt will be made to explain the numbers within the tables and graphs and to translate them into usable information. The chapter will conclude with recommendations of which job series may be able to receive transferred personnel and the training and skills that may be needed to achieve this goal. Having a grasp of this knowledge, managers can then determine what changes in accessions can be made and the effect the changes will have on the size of the workforce.

IV. ANALYSIS, SCENARIOS, AND JOB COMPARISONS

This chapter gives the details of the analysis performed on the stocks, attrites, accessions, and forecasts discussed in Chapter III. The objective is to use the model to forecast stocks and to determine which jobs will be able to receive personnel from jobs that may be eliminated. Using one group as an example, various scenarios will be presented to show the effects of particular hiring practices. An attempt will be made to compare the jobs that may be eliminated with those jobs predicted to be left vacant and to identify the training and skills that may be needed to successfully transfer them.

A. ANALYSIS

With the exception of the Science/Technical group, all groups have increased in the number of stocks since QTR 1 FY 1989. In the case of the Administrative group, the number of personnel employed increased by 325%, during the eight-year period. The reasons for these increases are beyond the scope of this thesis. However, for managers to understand their hiring practices, it is necessary to understand how the stocks reached the level they did in QTR 4 FY 1996. Therefore, an

analysis must include not only the stocks but also the attrites and accessions. The example of the Financial group will continue to be used to illustrate the analytic process.

1. Stocks, Attrites, and Accessions

The stock of personnel in the Financial group increased from 34 in QTR 1 FY 1989 to 58 in QTR 4 FY 1996, an increase of 63% (see Table 5.). The attrition data shows that the

FINANCIAL GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	34	32	34	31	1	0	0	2	2	2	1	3
FY 1990	30	33	30	30	0	2	0	2	2	1	0	5
FY 1991	37	38	38	34	1	3	2	1	1	4	1	3
FY 1992	36	36	38	38	2	0	2	0	3	2	1	3
FY 1993	41	40	43	48	1	0	3	3	1	2	0	4
FY 1994	46	43	43	45	2	1	3	3	2	2	3	3
FY 1995	46	50	51	52	3	1	1	0	2	1	0	7
FY 1996	55	59	59	58	0	2	4	3	3	0	2	3

Table 5. Stocks, attrites, and accessions for Financial group.

number of attrites in the first and second quarters is lower than those in the third and fourth quarters. A closer look at the attrition data reveals that the majority of these attrites come from series 0525, Accounting Technicians, and that in 36 of the 48 quarters studied, at least one Accounting Technician attrited. Additionally, the average number of accessions is

higher than the average number of attrites for QTR's 1, 2, and 4 which explains the increase in the stock level. The majority of these accessions also occur in series 0525.

2. Forecasts

The forecast for the Financial group shows that the number of personnel employed will remain lower in third quarters than the other three quarters if past attrition and accession trends continue (see Figure 4.). Additionally, the

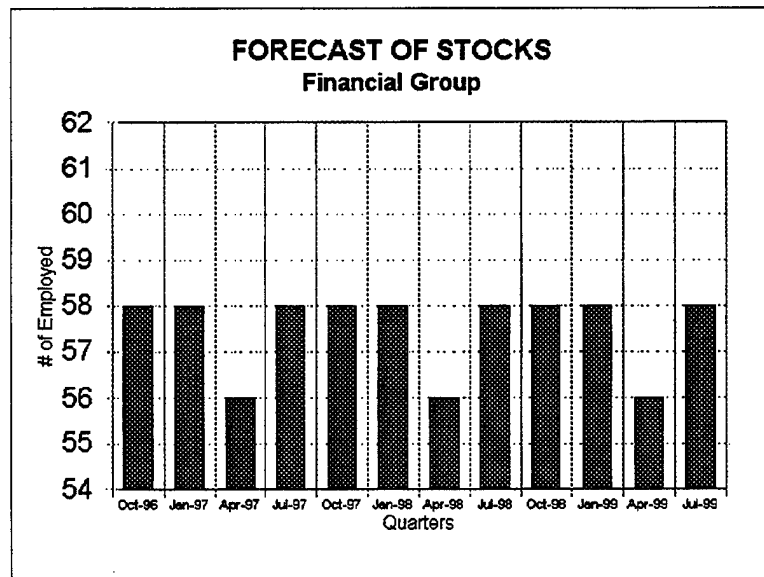


Figure 4. Forecast of Financial group.

forecast indicates that the stock of personnel during first, second, and fourth quarters will remain level during the three-year period. The forecast also shows that the stocks for third quarters will consistently be less than other

quarters. The forecast indicates that the difference in variation of forecasted stocks is two people for all twelve quarters.

3. Interpretation

a. Financial Group

It can be expected that because at least one person attrited in 75% of all quarters, this trend will most likely continue into the future. However, as long as the average number of accessions is fairly equal to the average number of attrites, stocks will remain fairly stable. Because the average number of attrites has historically been greater than the average number of accessions for third quarters, these third quarter decreases can be expected to continue into the future as evidenced by the forecasted stocks. Analysis of the other eight series within the group reveals very little attrition and very few accessions compared to series 0525, Accounting Technicians. Therefore, it is reasonable to conclude that, unless management changes its hiring patterns or if the external environment generates a demand for the skills within this group, this trend will most likely continue into the future.

b. Other Groups

The other eleven groups were analyzed similarly as above. Highlights of these groups are presented here.

SAFETY, FIRE, AND, POLICE GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	49	49	47	49	4	5	2	2	2	3	3	7
FY 1990	53	52	50	51	3	4	1	4	2	1	2	6
FY 1991	53	53	56	57	6	1	1	2	7	5	2	1
FY 1992	57	54	55	56	3	3	2	3	0	3	4	3
FY 1993	55	48	50	67	0	1	4	6	3	1	1	2
FY 1994	68	60	60	60	0	2	2	0	4	1	3	0
FY 1995	59	81	84	81	0	0	4	2	2	2	1	6
FY 1996	79	81	75	81	3	4	2	2	8	1	11	0

Table 6. Stocks, attrites, and accessions for Safety, Fire, and Police group.

(1) Safety, Fire, and Police Group. Stocks increased from 49 to 81, a 65% increase, during the eight year period (see Table 6.). Although stocks only slightly increased from QTR 1 FY 1989 to QTR 1 FY 1995, a big increase occurred from QTR 2 FY 1995 and on. The 65% increase in stocks is largely attributed to NPS taking over the security and fire control responsibilities of the Presidio of Monterey (POM) Annex. The average attrition rate changed very little from one quarter to the next. The average number of attrites during each of the four quarters varies only between 2.25 (third quarters) and 2.63 (fourth quarters). The average number of accessions was slightly greater than the average number of attritions in each of the four quarters. Looking to the future, the forecast of stocks ranges from 78 to 81 personnel during the three-year period (see Figure 5.). The largest forecasted stocks occur at the beginning of the three-

year period and the smallest forecasted stocks occur toward the end of the period. Overall, this group will decrease by one person annually through July 1999.

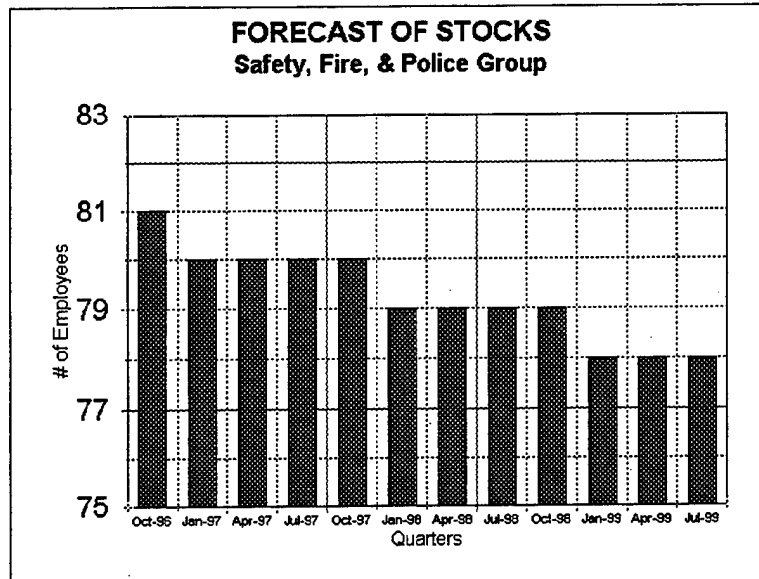


Figure 5. Forecast of Safety, Fire, and Police group.

(2) HRO Personnel Group. Stocks increased from 18 to 24, a 33% increase, during the eight-year period, largely attributed to the personnel increases in series 0203, Personnel Assistants (see Table 7.). On the average, approximately one person attrited from the group per quarter, although the average attrition rate is smaller during second quarters and higher during third quarters. The average attrition rates seem quite high but the small numbers of personnel within the group account for this phenomenon. The average number of accessions is slightly higher than the average number of attrites during this period, accounting for

HRO PERSONNEL GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	18	18	18	15	0	0	2	1	0	0	1	1
FY 1990	16	18	16	16	2	1	2	1	3	2	2	4
FY 1991	20	22	22	21	3	1	1	1	1	3	0	2
FY 1992	22	23	21	22	2	1	1	3	2	0	1	2
FY 1993	21	23	22	25	1	2	1	1	3	1	3	0
FY 1994	24	23	23	25	0	0	1	0	1	2	1	2
FY 1995	27	29	29	26	1	0	4	0	2	0	1	0
FY 1996	24	24	24	24	1	0	1	1	2	0	0	0

Table 7. Stocks, attrites, and accessions for HRO Personnel group.

the increase in stocks. The forecast of stocks indicates an annual decrease of one person during the three-year period (see Figure 6.).

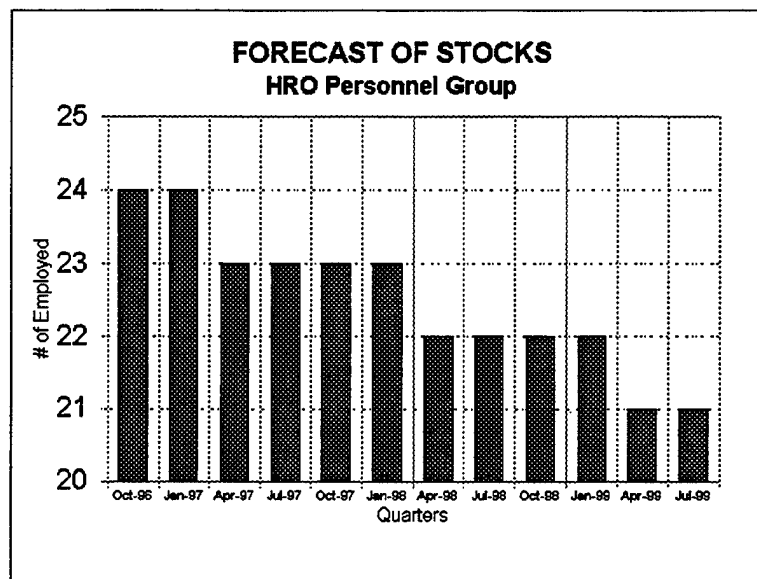


Figure 6. Forecast of HRO Personnel group.

(3) Administrative Group. An overall increase of personnel within this group accounts for the rise from 4 to 17, a 325% increase, in stocks during the eight-year period

(see Table 8.), although the stock for series 0342, Support Services Specialist/Supervisors, has decreased to FY 1990 levels. The average number of attrites is less than one

ADMINISTRATIVE GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	4	4	4	4	0	1	0	0	0	1	0	1
FY 1990	5	6	6	6	1	1	0	0	1	0	0	0
FY 1991	11	11	11	11	0	0	0	0	0	0	0	1
FY 1992	12	13	13	14	0	0	1	0	2	1	1	0
FY 1993	13	11	13	15	0	0	0	0	0	0	0	0
FY 1994	14	12	12	11	0	0	1	1	0	0	0	0
FY 1995	9	11	13	13	0	1	0	0	1	0	1	1
FY 1996	13	14	17	17	1	1	1	0	1	3	0	2

Table 8. Stocks, attrites, and accessions for Administrative group.

implying a low average attrition rate. In fact, of the three series in this group, only three people from series 0341 and two people from series 0343, Management Analysts, have attrited during the entire eight year period. The average number of accessions is higher than the average number of attrites in quarters one, two, and four. The forecast of stocks remains remarkably steady at 17 personnel for the entire three-year period (see Figure 7.).

(4) Computer Operators/Specialists Group. An increase in stocks from 53 to 91, a 72% increase, during the eight-year period, is largely attributed to the increase in series 0334, Computer Specialists (see Table 9.). The other

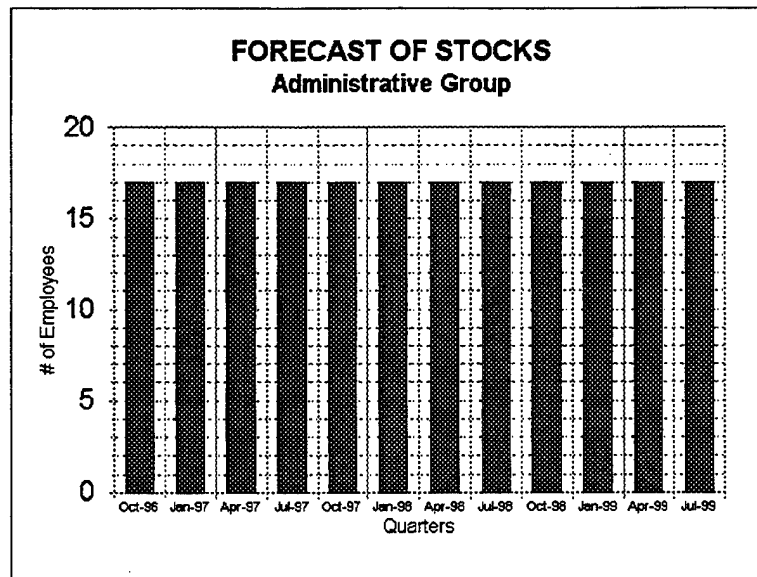


Figure 7. Forecast of Administrative group.

COMPUTER OPERATORS/SPECIALISTS GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	53	52	53	59	0	1	1	2	2	9	4	0
FY 1990	59	60	59	56	3	4	2	9	2	2	2	2
FY 1991	58	65	66	68	1	5	2	6	10	4	3	2
FY 1992	63	64	63	74	1	2	13	5	4	1	7	2
FY 1993	76	74	72	89	1	2	5	11	3	2	6	5
FY 1994	84	73	71	75	2	6	3	4	2	1	6	3
FY 1995	74	75	77	85	1	1	1	1	3	2	10	7
FY 1996	75	83	88	91	2	2	4	7	6	5	7	5

Table 9. Stocks, attrites, and accessions for Computer Operators/Specialists group.

two series, 0332, Computer Operators and 0335, Computer Clerks remain at their FY 1989 levels. The average number of attrites is higher among series 0334 and higher in the third and fourth quarters. However, the average number of attrites has been lower during FY's 1995 and 1996 than in previous

years. The average attrition rate remains high in this group compared to other groups. In QTR's 1, 2, and 3, the average number of accessions is much higher than the average number of attrites. The forecast of stocks shows personnel ranging from 86 to 93 over the next three years (see Figure 8.). The

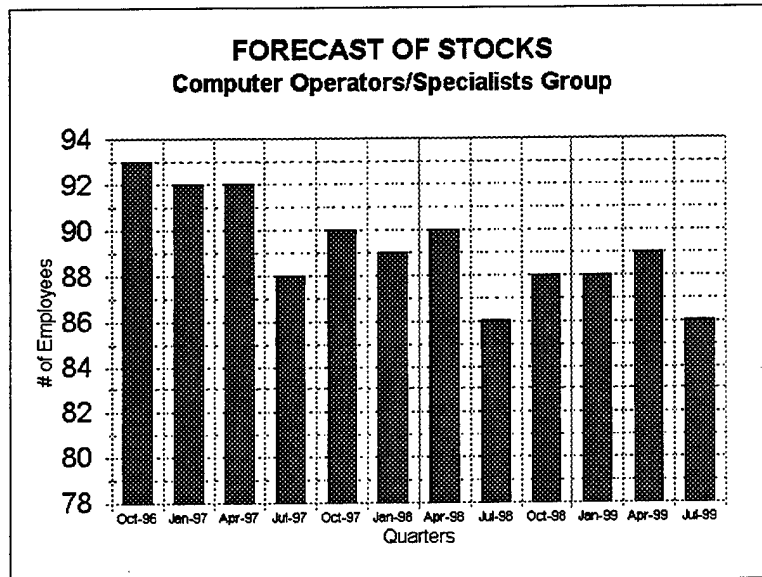


Figure 8. Forecast of Computer Operators/Spec. group.

largest decreases of personnel occur from third to fourth quarters. The historically high average number of accessions for third quarters accounts for the increases in personnel during QTR 3 FY 1998 and QTR 3 FY 1999.

(5) Engineers/Technicians Group. Stocks increased from 44 to 68, a 55% increase (see Table 10.), during the eight-year period, due mostly to the increase in stocks of series 0801, General Engineers, and series 0802, Engineering Technicians. Four people hired as a result of the

ENGINEERS/TECHNICIANS GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	44	46	45	44	0	2	1	1	3	4	1	0
FY 1990	46	43	45	48	3	1	0	3	0	2	3	5
FY 1991	51	52	53	59	2	2	0	5	3	3	3	2
FY 1992	59	60	57	58	2	2	4	2	3	1	2	7
FY 1993	60	56	57	74	0	2	0	3	2	0	4	1
FY 1994	73	57	57	57	1	1	4	2	1	2	2	1
FY 1995	58	63	64	69	5	1	2	2	5	1	5	2
FY 1996	69	66	67	68	3	3	2	1	4	8	4	0

Table 10. Stocks, attrites, and accessions for Engineers/Technicians group.

Fort Ord closure and in support of the POM Annex, account for the increase in personnel in series 0802. The average quarterly attrition rates are normal compared to other groups. However, the rates themselves are mostly due to the attrition of 0802's and 0856's, Electronics Technicians. With the exception of fourth quarters, the average number of accessions is greater than the average number of attrites, accounting for the overall increase in stocks. The forecast of stocks reveals a steady stock level of personnel during fourth quarters (see Figure 9.). But overall, there is an increasing trend in stock levels for the entire three-year forecast period.

(6) Procurement/Supply Group. The hiring of 21 personnel in series 1102, Procurement and Contract Analysts, as a result of the Fort Ord closure and POM Annex support, partially accounts for the increase from 31 to 84 in

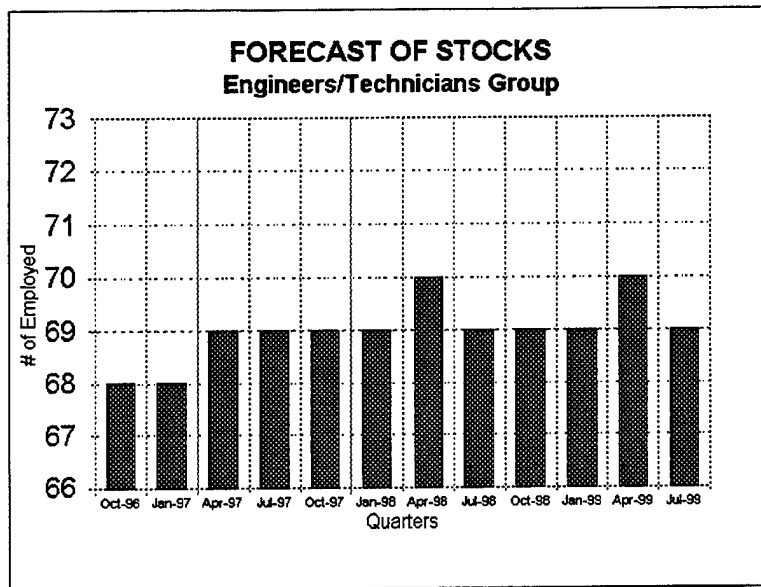


Figure 9. Forecast of Engineers/Technicians group.

stocks, a 63% increase, during the eight-year period (see Table 11.). The other cause is the large number of accessions in series 2005, Supply Technicians. Ironically, most of the attritions in this group occur in series 2005. The number of attrites in the 2000 series, excluding series 2005, is as low as three for the entire 48 quarter period. The average number

PROCUREMENT/SUPPLY GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	31	30	27	29	3	2	0	2	4	2	1	2
FY 1990	29	34	28	28	2	6	1	2	5	1	0	3
FY 1991	50	53	50	45	2	2	2	2	8	1	1	5
FY 1992	50	50	47	47	7	1	1	2	1	4	3	3
FY 1993	60	62	61	70	2	2	3	3	7	0	1	3
FY 1994	69	57	56	56	1	3	2	5	2	3	3	5
FY 1995	55	84	87	87	3	1	1	1	5	4	5	3
FY 1996	88	78	85	84	6	2	4	6	4	8	2	0

Table 11. Stocks, attrites, and accessions for Procurement/Supply group.

of accessions is slightly higher than the average number of attrites for QTR'S 3 and 4 and much higher in QTR's 1 and 2. The forecast of stocks reveals a large decrease of personnel during the three-year period (see Figure 10.). This

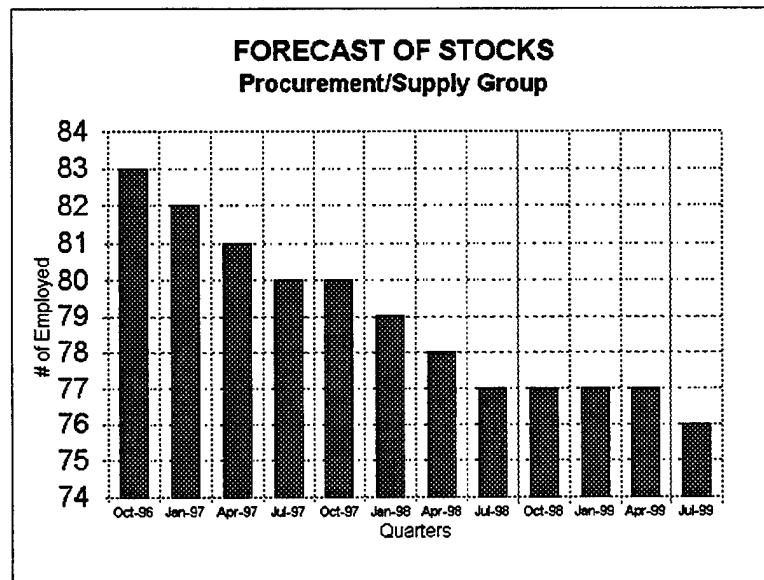


Figure 10. Forecast of Procurement/Supply group.

decreasing trend appears to have begun with the stocks in FY 1996. Stocks will decrease annually by approximately three people.

(7) Public Works/Staff Group. An increase in stocks from 10 to 32, a 220% increase, during the eight-year period (see Table 12.), is mostly due to the increases of personnel in series 1152, Production Controllers, and series 1173, Housing Management. Again, these increases are the result of the Fort Ord closure and NPS/NSA-MB taking over the

PUBLIC WORKS/STAFF GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	10	11	8	7	0	0	0	0	2	1	0	0
FY 1990	6	7	8	7	0	0	1	1	1	0	0	0
FY 1991	11	10	12	12	1	0	1	1	0	2	0	1
FY 1992	14	11	10	10	2	0	2	1	0	1	1	0
FY 1993	9	9	10	13	0	0	0	0	0	0	0	0
FY 1994	13	11	11	11	0	0	0	0	0	0	0	6
FY 1995	16	28	30	31	0	0	0	0	5	1	0	2
FY 1996	31	28	31	32	1	0	0	0	1	2	1	2

Table 12. Stocks, attrites, and accessions for Public Works/Staff group.

POM Annex responsibilities. The other three series in this group, 1601, Public Works Superintendent, 1640, Facilities Manager, and 2151, Emergency Service Work Dispatcher do not appear until FY 1995 and FY 1996 where the large increases in stock occur. Overall, the average rate of attrition is low. In fact, most attritions occurred between FY 1990 and FY 1992, and only one person has attrited since then. No attrition occurred during second quarters. The average number of accessions is higher than the average number of attrites in every quarter except third quarters. These accessions occurred mostly during FY 1994, FY 1995 and FY 1996. The average number of attrites being greater than the average number of accessions in past third quarters account for the relatively lower stock levels in forecasted third quarters, even though the overall trend of stock levels during the three-year period is upward (see Figure 11.).

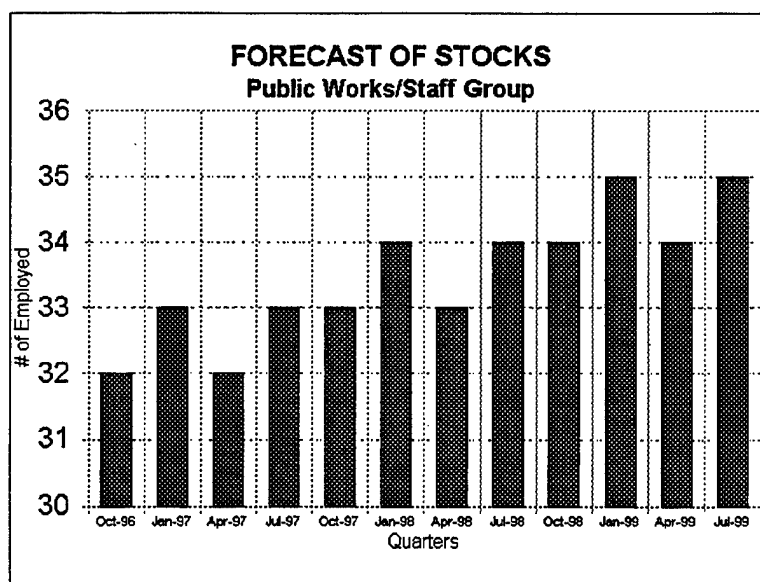


Figure 11. Forecast of Public Works/Staff group.

(8) Science/Technical Group. Overall, stocks decreased from 45 to 42, a 7% decrease, during the eight-year period, although there was a 16% increase during the period of FY 1994 (see Table 13.). The attrition rates are higher in third and fourth quarters and appear predominantly in series 1311, Physical Science Technicians and Aides. However, this

SCIENCE/TECHNICAL GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	45	44	38	37	2	1	2	1	2	0	3	4
FY 1990	40	40	40	36	1	0	5	2	1	1	1	3
FY 1991	41	40	38	43	0	3	1	3	2	1	5	3
FY 1992	44	40	41	41	3	3	2	3	2	2	0	2
FY 1993	42	38	36	57	1	0	2	3	0	1	5	0
FY 1994	52	37	37	42	0	0	1	2	2	0	4	0
FY 1995	41	39	38	43	2	1	1	1	1	1	5	2
FY 1996	42	41	41	42	2	1	1	1	0	1	2	1

Table 13. Stocks, attrites, and accessions for Science/Technical group.

group contains thirteen different series, and since the average number of personnel in each series is small, just one quarterly attrite has a substantial effect on the quarterly attrition rate. The average number of accessions is almost equal to the average number of attrites in all quarters except third quarters where the average number of accessions is nearly twice that of the average number of attrites, thus accounting for the increases during forecasted third quarters. Consequently, the forecast of stocks shows a steady level during the period from third quarters to second quarters, while the increases during third quarters cause an overall increasing trend for the three-year period (see Figure 12.).

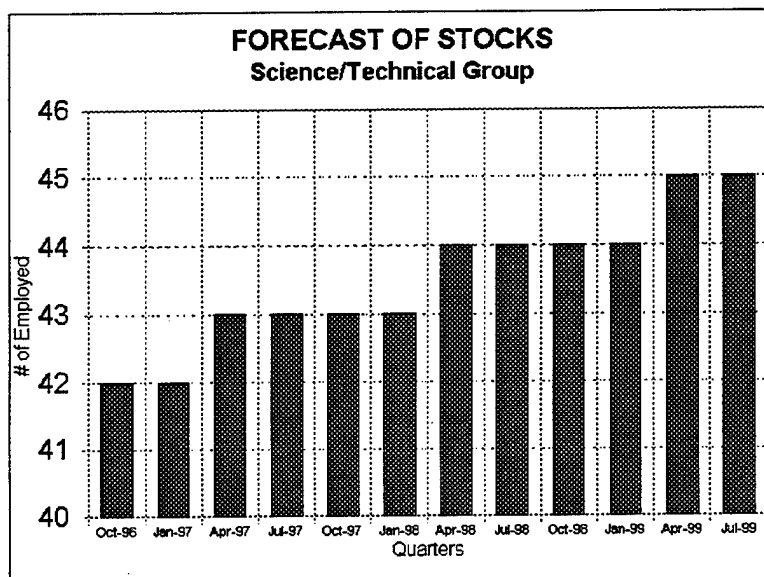


Figure 12. Forecast of Science/Technical group.

(9) Library Group. A two-fold increase in the number of Library Technicians, series 1411, caused stocks to increase from 18 to 28, a 56% increase, during the eight-year period (see Table 14.). The average number of attrites is

LIBRARY GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	18	18	19	22	1	1	2	1	0	2	2	0
FY 1990	21	23	21	20	1	3	1	1	1	1	0	1
FY 1991	21	21	23	26	0	2	0	1	1	5	3	4
FY 1992	29	28	31	30	3	1	1	2	2	3	1	1
FY 1993	33	31	31	44	2	1	0	2	1	0	0	1
FY 1994	42	26	25	25	2	1	2	2	2	0	1	0
FY 1995	25	29	29	30	0	1	0	2	2	0	1	0
FY 1996	27	28	29	28	0	2	2	3	1	2	0	3

Table 14. Stocks, attrites, and accessions for Library group.

higher for 1411's than for series 1410, Librarians. In fact, the average attrition rates are higher in this group than most other groups and are highest in the second and fourth quarters. However, the average number of accessions are slightly higher than the average number of attrites. Consequently, the forecast reveals a stable stock of 28 personnel for the three-year period (see Figure 13.).

(10) Education/Training Group. A four-fold increase in series 1701, Education Development Specialists, and series 1702, Educational Technicians account for the increase in stocks from 14 to 50, a 257% increase, during the

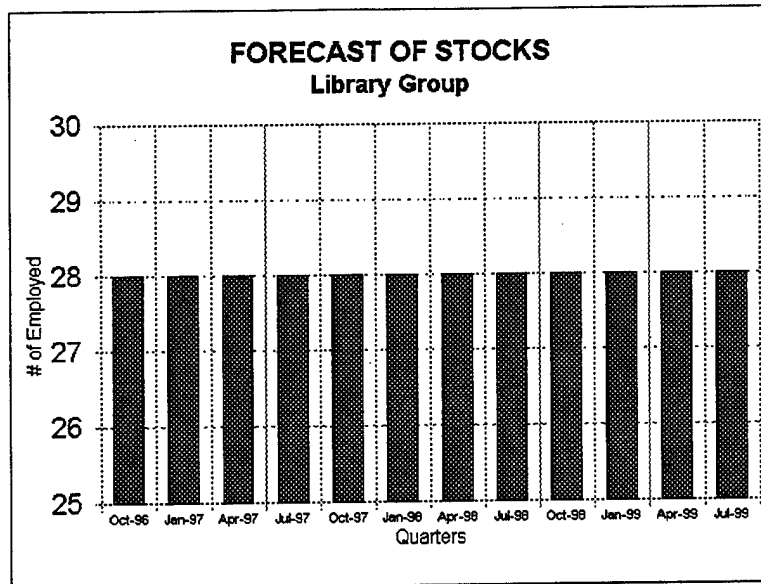


Figure 13. Forecast of Library group.

eight-year period (see Table 15.). Much of these increases were attributed to nine personnel who were reclassified as series 1701 and 1702 as a result of a Navy directive ordering the reclassification of employees working with child care during QTR 2 FY 1995. The other two series, 1712, Training Officer and 1750, Supervisory Instructional Systems

EDUCATION/TRAINING GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	14	13	12	12	1	1	1	0	0	1	1	0
FY 1990	11	11	10	11	2	0	0	1	1	0	0	0
FY 1991	21	22	21	21	1	1	0	0	2	1	0	0
FY 1992	21	25	27	27	1	2	1	2	8	3	0	2
FY 1993	34	36	40	44	1	0	3	2	1	1	0	3
FY 1994	45	40	41	40	3	1	0	2	4	0	1	1
FY 1995	39	48	48	48	1	0	2	1	1	1	4	0
FY 1996	47	49	50	50	0	0	2	0	2	1	1	0

Table 15. Stocks, attrites, and accessions for Education/Training group.

Specialist, do not appear until FY 1995 and FY 1996. The average attrition rates for third and fourth quarters are relatively normal compared to other groups. The average attrition rates for first and second quarters are respectively higher and lower than average. Most of the attrites come from series 1702. The average number of accessions is higher in the first and second quarters and lower in the third and fourth quarters than the average number of attrites. These third and fourth quarter averages are evident, as the forecast of stocks shows future third and fourth quarters responsible for decreases in stock levels (see Figure 14.). Overall, the forecast projects that personnel in this group will decrease on the average of two people per year during the three-year period.

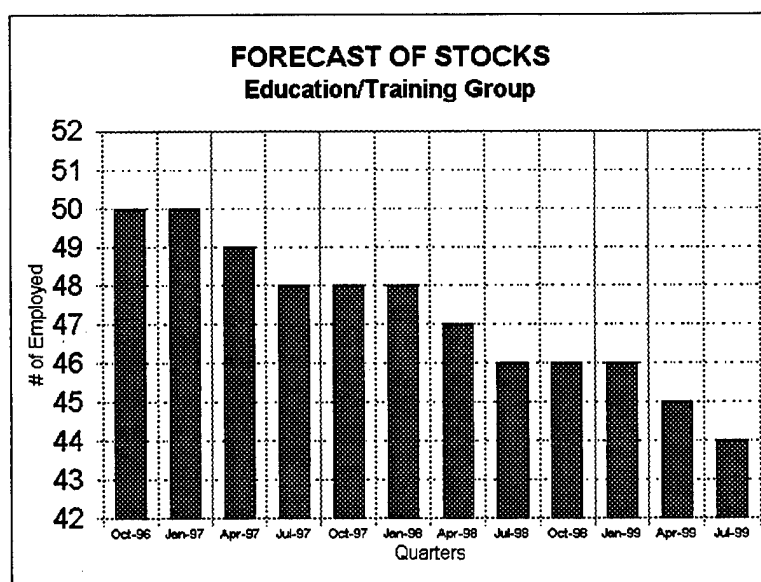


Figure 14. Forecast of Education/Training group.

(11) Wage Grade/Supervisors. Stocks increased from 116 to 231, an 99% increase, during the eight-year period (see Table 16.), largely attributed to personnel increases in

WAGE GRADE/SUPERVISORS GROUP												
	Stocks				Attrites				Accessions			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
FY 1989	116	121	121	119	5	3	6	1	7	6	4	3
FY 1990	119	119	116	113	5	3	3	3	4	0	2	4
FY 1991	111	108	107	107	5	6	3	2	4	1	5	2
FY 1992	103	106	102	106	2	5	5	2	6	2	7	5
FY 1993	104	109	109	120	0	3	3	7	5	6	12	8
FY 1994	122	115	115	121	3	4	3	3	2	6	9	34
FY 1995	141	220	220	224	13	0	2	2	23	4	7	14
FY 1996	236	233	235	231	3	9	4	3	4	6	4	6

Table 16. Stocks, attrites, and accessions for Wage Grade/Supervisors group.

series 3502, 4701, and 4749, Laborers, Maintenance and General Helpers, and Maintenance Mechanics respectively. Once again, these increases were due to an assumption of support services for the POM Annex. Overall, average attrition rates are normal compared to other groups, although highest in first quarters. The average number of accessions are higher than the average number of attrites for first, third, and fourth quarters. Most of the accessions appear to have occurred during fourth quarters. Consequently, the increasing trend during forecasted fourth quarters reflects the high fourth quarter accessions during the eight-year period (see Figure 15.). Forecasted stocks for first quarters are lower than the

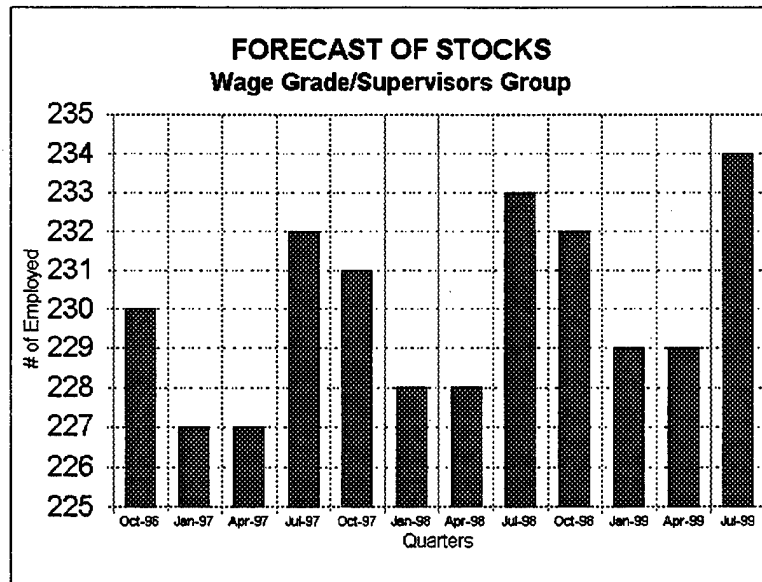


Figure 15. Forecast of Wage Grade/Supervisors group.

previous fourth quarter. Forecasted second and third quarter stocks increase one person annually. Overall, there will be an increasing trend during the three-year period with stocks ranging from 227 to 234.

B. SCENARIOS

In the previous section, the forecasts were computed using the historical accession averages. However, it is possible to substitute desired accessions in the forecasting model to achieve forecasts that reflect future intentions of management. Since the issue of force reduction is in question, decreased accessions will most probably be considered by management. Once management decides it wants to decrease the stock of personnel in a particular group, it must determine how it wants to achieve that level. As mentioned

before, management has the option of decreasing the number of personnel it hires or to stop hiring completely. Three scenarios will be presented, using the Financial group, to demonstrate the effects of certain hiring practices.

1. "No Hires" Scenario

This scenario assumes no one is hired during any of the four quarters. Specifically, the average quarterly number of civilians joining the workforce is equal to zero. Using Equation (3.1), $S_{k+1} = (1-W_k)*S_k + A_k$, the following substitutions are made:

$$\begin{array}{lll} W_1 = .0308 & A_1 = 0 & S_1 = 58 \\ W_2 = .0272 & A_2 = 0 & \\ W_3 = .0446 & A_3 = 0 & \\ W_4 = .0417 & A_4 = 0 & \end{array}$$

The result is graphically shown in Figure 16. The average quarterly attrition rates are roughly equivalent to an average decrease of two personnel per quarter. This means that given the past attrition trends and simply not hiring anyone, the number of personnel in the Financial group will decrease by almost two per quarter. Given the low attrition rate in the second quarters, there will be periods of just a one person decrease such as the quarter starting in January 1998 and January 1999. If management wanted to decrease the size of

the workforce of the Financial group any faster, it would have to force an increase in the attrition rate through other means such as RIF's.

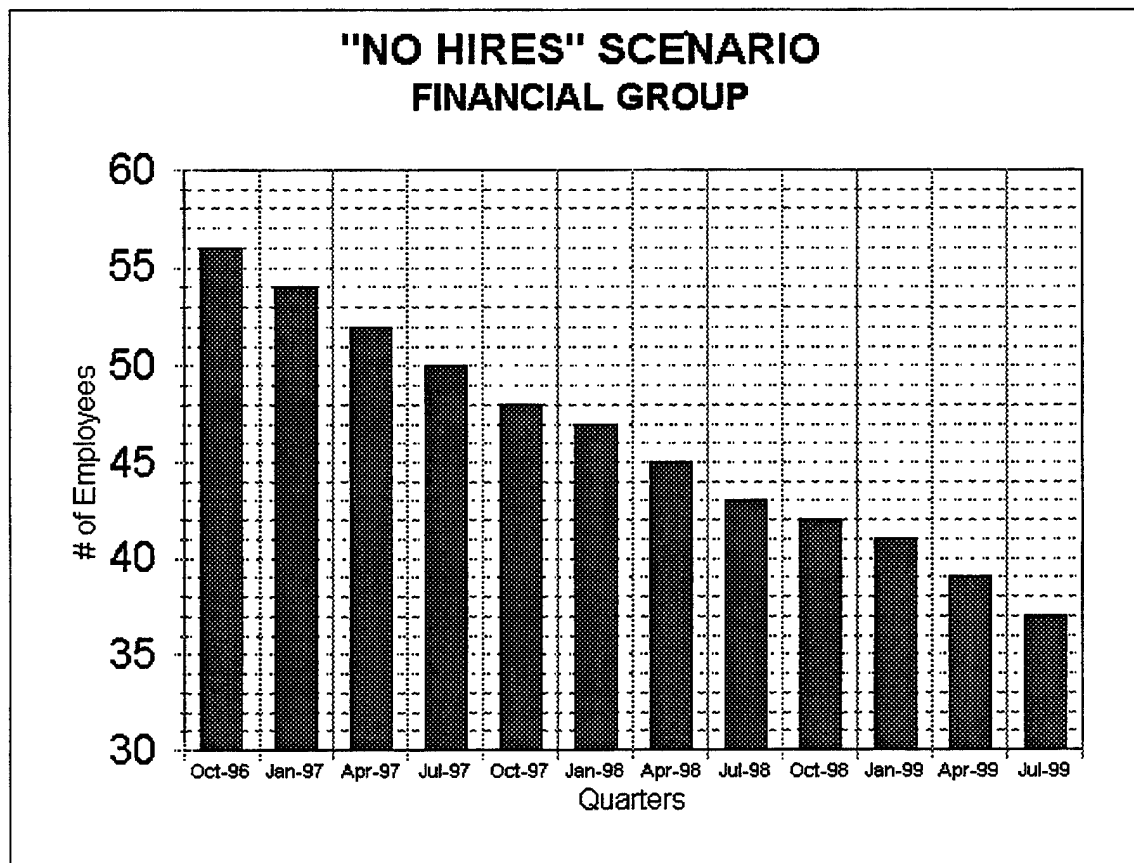


Figure 16. Forecast of Financial group using "No Hires" scenario.

2. "One Hire/Quarter" Scenario

This scenario assumes only one person is hired during each of the four quarters. Specifically, the average quarterly number of civilians joining the workforce is equal to one. Using Equation (3.1), the following substitutions are made:

$$\begin{array}{lll}
 W_1 = .0308 & A_1 = 1 & S_1 = 58 \\
 W_2 = .0272 & A_2 = 1 & \\
 W_3 = .0446 & A_3 = 1 & \\
 W_4 = .0417 & A_4 = 1 &
 \end{array}$$

The result is graphically shown in Figure 17. Again, the average quarterly attrition rates are roughly equivalent to an average decrease of two personnel per quarter. However, this decrease is offset by the hiring of one person per quarter.

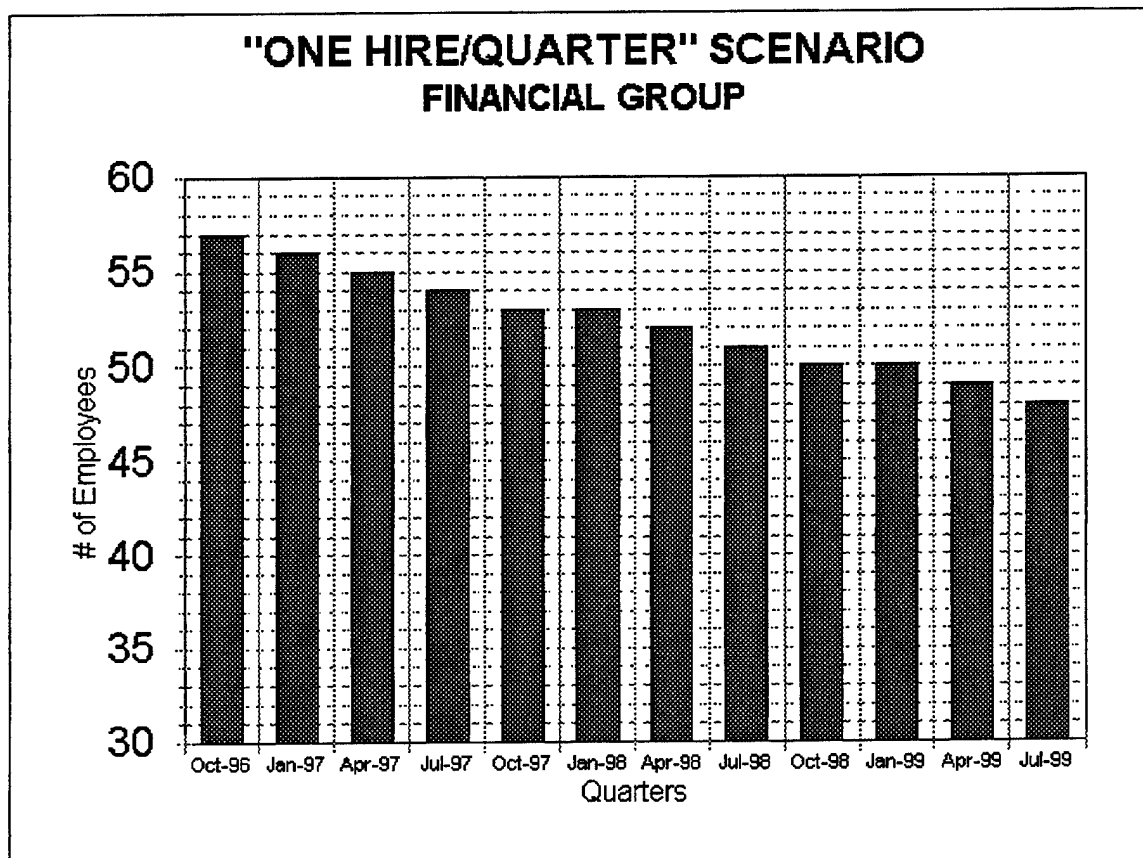


Figure 17. Forecast of Financial group using "One Hire/Quarter" scenario.

This means that given the past attrition trends and simply hiring one per quarter, the average number by which stocks will decrease in the Financial group in any given quarter is one. The low attrition rate during second quarters will periodically cause a zero decrease of people per quarter such as the quarter starting in January 1998 and January 1999. This scenario could be used if management desired to decrease the size of personnel in the Financial group at a slower rate.

3. "Every Other Quarter" Scenario

This scenario assumes only one person is hired every other quarter. Specifically, the average quarterly number of civilians joining the workforce is equal to one in the first and third quarters and equal to zero in the second and fourth quarters. Using Equation (3.1), the following substitutions are made:

$$\begin{array}{lll} W_1 = .0308 & A_1 = 1 & S_1 = 58 \\ W_2 = .0272 & A_2 = 0 & \\ W_3 = .0446 & A_3 = 1 & \\ W_4 = .0417 & A_4 = 0 & \end{array}$$

Since the lowest average attrition rate occurs during an even-numbered quarter and the highest during an odd-numbered quarter, one was used for A_1 and A_3 and zero for A_2 and A_4 . The result is graphically shown in Figure 18. Again, the average quarterly attrition rates are roughly equivalent to an

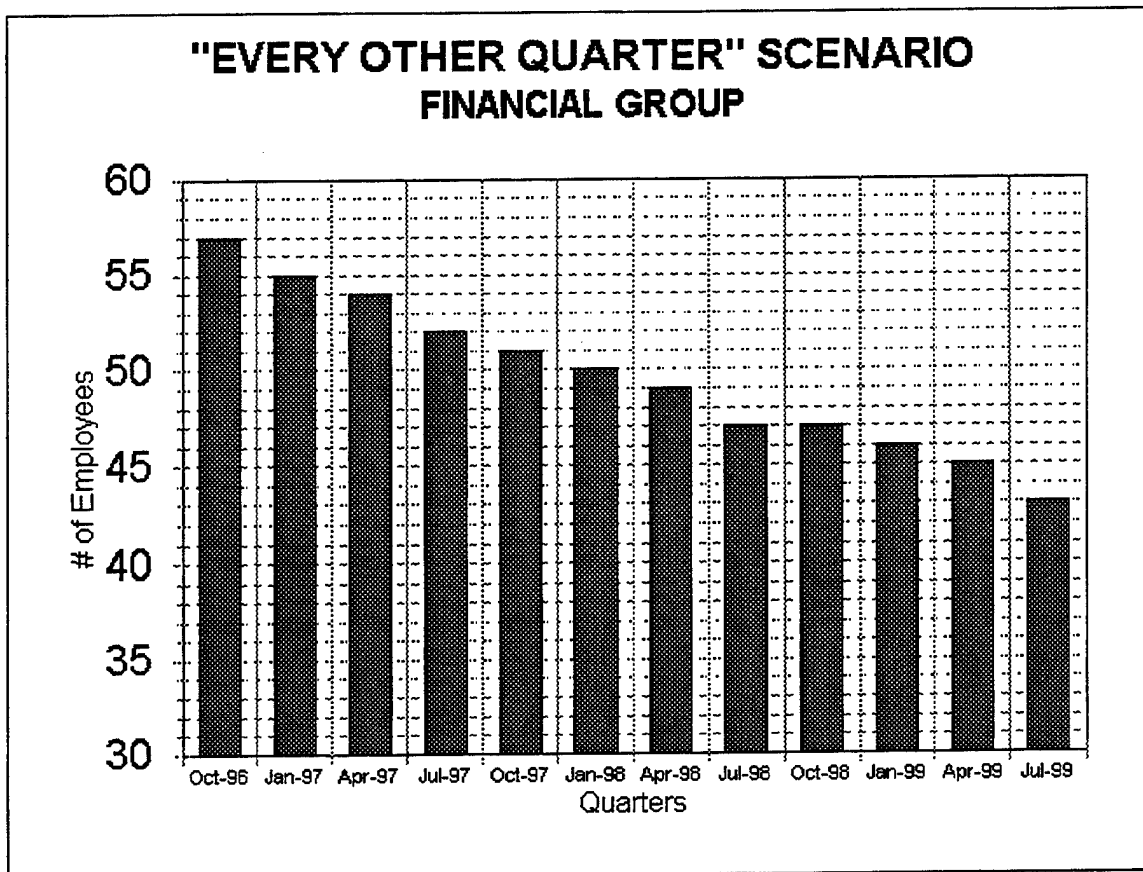


Figure 18. Forecast of Financial group using "Every Other Quarter" scenario.

average decrease of two personnel per quarter. This means that given the past attrition trends and hiring only one person during quarters one and three, stocks will decrease by one to two people in the Financial group in any given quarter. This scenario allows managers to decrease stocks by more personnel during periods of low attrition and less personnel during periods of high attrition. The effect is less fluctuation of personnel between the four quarters in any given year. Managers may desire to use a scenario similar to this one if a more even stock level is to be maintained.

These three scenarios, depicted graphically in Figures 16, 17, and 18, provide a visual presentation of how stocks may be decreased in the three-year period. In all three scenarios, the beginning stock was 58. Depending on the number of accessions (hires), the final stock in QTR 4 FY 1999 will range from 37 in the "No Hires" scenario to 48 in the "One Hire/Quarter" scenario. Of course, the choice of which scenario to use is not limited to the three presented here. Managers at NPS and NSA-MB will need to decide in which job series these reductions will take place, in what time period the reductions will occur, and how quickly to induce the reductions. Just as these three scenarios were developed for the Financial group, the same analysis can be applied to the other eleven groups. If, after using one scenario, it is determined that the force reduction does not occur as desired, then other alternative scenarios will have to be considered.

C. JOB COMPARISONS

In this section, an attempt will be made to compare jobs that may be eliminated with those predicted to be left vacant. The goal of these comparisons is to identify those jobs with similar qualifications, while determining if the vacancies will exist to receive personnel from eliminated jobs. Consequently, if the forecast does not reveal a decreasing trend in stocks for jobs that may be eliminated or if the

forecast does not produce the vacancies in "receiving" job series needed to receive personnel from eliminated jobs, it will then be necessary for managers to consider various alternative scenarios in order to achieve the desired vacancies. The first step in this process is to identify what jobs may be eliminated.

1. Possible Job Eliminations

It is important to realize that at the time of this study, the possibility of outsourcing certain jobs at NPS and NSA-MB exists. No decisions have been made by the NEB or any other authority to eliminate any jobs. However, some jobs were identified as candidates for possible elimination for the sake of this study so that the results could provide management the information needed to make the hard decisions. A CNO message [Ref. 2] directing shore commands to consider outsourcing certain jobs was used to compile the following list of possible job eliminations. Various interviews with Associate Provosts, Department Heads, Personnel Officers, and Organizational Support Division members were also instrumental in this compilation. Jobs that may be eliminated are:

- Series 0081, Firefighter
- Series 0083, Police Officer
- Series 0201, Personnel Management Specialist
- Series 0203, Personnel Assistant

- Series 0230, Employee Relations Specialist
- Series 0235, Employee Development Specialist
- Series 0260, Equal Employment Specialist
- Series 0303, Administrative Support Assistant
- Series 0361, Equal Opportunity Assistant
- Series 0525, Accounting Technician
- Series 1106, Procurement Technician
- Series 2005, Supply Technician
- Series 2102, Transportation Clerk and Assistant
- Series 5803, Heavy Mobile Equipment Mechanic
- Series 5823, Automotive Mechanic

Most of these jobs may be eliminated due to reorganization or outsourcing. Others, such as series 0303, 0525, and 2005, may be eliminated as a result of technological improvements in travel, accounting, and supply systems. Although this list is not conclusive, only those jobs with some degree of certainty of being eliminated are listed here based on factual information and informed speculation.

2. Work Analysis

Since the analysis of the forecasts revealed less than half of the groups will experience a decreasing trend in future stocks, it appears to be prudent to conduct a work analysis to identify those job series currently in place at

NPS/NSA-MB with similar qualification requirements to the ones where job eliminations may occur. Using job description methodology, the Qualification Standards for General Schedule Positions (TS-2) and the Job Qualification System for Trade and Labor Occupations (X-118C) were reviewed to identify qualification similarities.

a. TS-2

The TS-2 is published by the Office of Personnel Management and provides general policies and instructions to determine the requirements for qualifying for a specific government job. It lists the educational prerequisites, training requirements, and general and specialized experience necessary to qualify for a job. In some cases, the qualifications differ within the job series depending on grade level position. Additionally, some job series have their own particular requirements, while many job series have the same requirements differing only in the specialized experience necessary for the job described. Job series which have these same requirements are compiled under Group Coverage Qualification Standards. A few jobs require a proficiency exam, and for certain positions, completion of a specialized course of study can fulfill the experience requirements for GS-3 positions. For GS-5 positions and below, it is not necessary to fulfill 100% of all the requirements, but the

combination of the percentages of the post-high school educational requirements and the percentages of the experience requirements must equal to 100%. Although the TS-2 is very specific in listing these requirements, personnel officers can waive certain requirements to further the hiring process.

b. X-118C

The X-118C is published by the U.S. Civil Service Commission. It tells how to identify the KSA's needed to do the work in federal trades and labor jobs. This publication gives personnel managers the ability to determine the extent to which applicants' qualifications match the job requirements. The system of hiring personnel in the Wage Grade/Supervisors group is different than in other groups. Under this system, how the applicant gained his or her skill and knowledge or the length of time the applicant has spent in the line of work are not as important as the fact that he or she has the required KSA's or potential to do the job.

c. Clerical and Administrative Support Positions

The qualification standards for series 0203, 0303, 0361, 0525, 1106, 2005, and 2102 are summarized under the Group Coverage Qualification Standard for Clerical and Administrative Support Positions.

(1) Similar Job Series. It seems logical to identify jobs whose qualifications are most similar with those

jobs that may be eliminated. There are 68 job series within the Group Coverage Qualification Standard for Clerical and Administrative Support Positions. Of these, only those job series employed at NPS and NSA-MB at the time of this study are included for analysis. Any job series not included in any group for the reasons mentioned in Chapter III are also not eligible for the analysis. Finally, job series whose average quarterly stocks are one or less are not included. Jobs whose qualifications fit these criteria and are similar to jobs that may be eliminated are listed in Table 17. Specifically, it lists job series in the Clerical and Administrative Support Positions that may be eliminated, as well as job series with similar qualification requirements, and the groups to which the job series belong to as defined in this study.

CLERICAL AND ADMINISTRATIVE SUPPORT POSITIONS (TS-2)	
Jobs Which May Be Eliminated	Similar Job Series
<u>HRO Personnel Group</u>	<u>Computer Operators/Specialists Group</u>
Series 0203	Series 0335
Series 0361	<u>Financial Group</u>
<u>Financial Group</u>	Series 0561
Series 0525	<u>Procurement/Supply Group</u>
<u>Procurement/Supply Group</u>	Series 1101
Series 1106	Series 1105
Series 2005	<u>Public Works/Staff Group</u>
Series 2102	Series 1152
<u>Not Grouped</u>	<u>Library Group</u>
Series 0303	Series 1411
	<u>Education/Training Group</u>
	Series 1702

Table 17. Clerical and Administrative Support Positions.

(2) Requirements. According to the Group Coverage Qualification Standard for Clerical and Administrative Support Positions, none of the similar job series have individual requirements and there are no specialized experience requirements for GS-4 and below. GS-5 and above positions require one year of experience in the next lower grade level. There are no proficiency requirements for the similar job series listed above. This implies that any of the series in the "Jobs Which May Be Eliminated" column can be transferred fairly easily, according to regulations, to series in the "Similar Job Series" column.

d. Administrative and Management Positions

The qualification standards for series 0201, 0230, 0235, and 0260 are summarized under the Group Coverage Qualification Standard for Administrative and Management Positions. Administrative and management positions are two-grade interval series, meaning the grade levels increase by two during career progression.

(1) Similar Job Series. Again, only those jobs whose qualifications are most similar with those jobs that may be eliminated are considered. There are 131 job series within the administrative and management positions. Of these, only those job series employed at NPS and NSA-MB at the time of this study are included in the analysis. Any job

series not included in any group for the reasons mentioned in Chapter III are excluded from the analysis. Finally, job series whose average quarterly stocks are one or less are also excluded. Given these criteria, jobs whose qualifications are similar to jobs that may be eliminated are listed in Table 18. Specifically, the matrix in Table 18 lists job series in the Administrative and Management Positions that may be eliminated, as well as job series with similar qualification requirements, and the groups to which the job series belong to as defined in this study. According to current regulations, all the jobs which may be eliminated can fairly easily be transferred to any one of the series in the "Similar Job Series" column without a need for extensive education or retraining.

ADMINISTRATIVE AND MANAGEMENT POSITIONS (TS-2)	
Jobs Which May Be Eliminated	Similar Job Series
<u>HRO Personnel Group</u>	<u>Administrative Group</u>
Series 0201	Series 0341
Series 0230	Series 0343
Series 0235	<u>Financial Group</u>
Series 0260	Series 0501
	Series 0560
	<u>Public Works/Staff Group</u>
	Series 1173
	<u>Education/Training Group</u>
	Series 1702

Table 18. Administrative and Management Positions.

(2) Requirements. According to the Group Coverage Qualification Standard for Administrative and Management Positions, none of these series have individual requirements. There is a general requirement for GS-5 positions but no specialized experience requirement. GS-7 positions require one year of graduate level education or one year of specialized experience equivalent to GS-5. GS-9 positions require a master's or equivalent graduate degree, two full years of progressively higher level graduate education leading to such a degree, or one year of specialized experience equivalent to GS-7. GS-11 positions require a Ph.D. or equivalent degree, three full years of progressively higher level graduate education leading to such a degree, or one year of specialized experience equivalent to GS-9. There are no additional proficiency requirements for the series listed above.

e. Other Series

Four job series, which may be eliminated, have their own specific requirements and are not within any Group Coverage. The difficulty in transferring them to other job series is presented here.

(1) Series 0081, Firefighter. Firefighters are a unique case. Unless a firefighter happens to have a higher education and other skills besides firefighting, it

will be extremely difficult to transfer him or her to another job. Three factors make the transfer very unlikely. First, the requirements to be a firefighter are unlike any other job series requirement. Second, because their duty schedules are more demanding than other jobs in terms of hours per week, firefighters would take a pay cut if they were to be transferred to any other job. Finally, as NPS Fire Chief Nutt replied during an interview when asked if a firefighter would consider doing anything else, "Firefighting is in their blood." As such, firefighters will more than likely be unwilling to change careers and search elsewhere for work instead.

(2) Series 0083, Police Officer. Police officers are similar to firefighters, in that the requirements to be a police officer are unlike any other job series requirement. According to NPS Police Chief Calvey, most police officers enjoy being police officers and will more than likely be unwilling to change their careers, making it improbable and difficult to transfer them to other jobs.

(3) Series 5803, Heavy Mobile Equipment Mechanics and Series 5823, Automotive Mechanics. The requirements needed to be a mechanic or any other wage grade, for that matter, are very specific. Like the other two series aforementioned, it will be difficult to transfer these

personnel to other jobs. Although, by trade, mechanics may be handy enough to do other laborious work, the difficulty in their transfer is compounded by an important factor. An analysis of the stocks and attrition data for mechanics reveals only one mechanic attrited during the eight-year period. James Rookwood, a Maintenance Supervisor, confirmed that most of the mechanics at NSA-MB have been employed there for more than twenty years. It is highly unlikely that these personnel will change their careers after so many years of experience as mechanics. However, if any people from these four series did wish to change careers, much training would be needed to make them productive employees in their new careers.

3. Vacancies

The next step in the job comparison process is to review the forecasted stocks of the groups comprised of the job series chosen thus far to receive transferred personnel. The goal is to identify which groups will have the vacancies available as predicted by the model and in what time period these vacancies will occur. If the vacancies do not exist, it may then be necessary to change hiring patterns to obtain the vacancies desired.

a. Administrative Group

Series 0341 and 0343 are two of the three series within this group. The forecasted stocks for this group reveal a steady stock level for the three-year period (see Figure 7.). Although the attrition rate is highest during second quarters, half of the attrites come from series 0342, Support Services Specialist. It appears that personnel could be transferred to this group only if management imposes a "No Hires" scenario or similar policy. Personnel could be transferred to series 0341 most efficiently during second quarters and to series 0343 during third quarters where the respective average number of attrites are highest (see Appendix C.). But these transfers can only take place if management does not hire from outside NPS/NSA-MB during second and third quarters.

b. Computer Operators/Specialists Group

Series 0335 is one of three series within this group. The forecasted stocks for the group reveal an overall decreasing trend for the three-year period (see Figure 8.). The highest attrition rate is found in the fourth quarter. Less than 20% of the quarterly attrites in first, second, and third quarters come from series 0335, while 45% come from 0335 in third quarters (see Appendix C.). The model forecasts a decrease of seven personnel during the twelve-quarter period,

but, based on past attrition data, most of these vacancies will come from series other than 0335. If managers desire to transfer personnel to series 0335, the fourth quarter will more than likely provide the most vacancies of all four quarters. If a transfer of personnel to series 0335 during quarters one, two and three is desired, management will have to decrease the numbers of personnel it hires from outside NPS/NSA-MB.

c. Financial Group

Series 0501, 0560, and 0561 are three of nine series within this group. The attrition rate for the group is highest during third quarters, however the large number of attrites in series 0525 accounts for most of the attrition rates in all four quarters (see Appendix C.). The forecasted stocks reveal the lowest stocks during the third quarters (see Figure 4.), but most of these vacancies will be in series 0525, a job series which may be eliminated. If managers desire to transfer personnel to this group, future quarters with the most vacancies will be second quarters for series 0501, third or fourth quarters for series 0560, and fourth quarters for series 0561. Managers could induce even more vacancies if they stopped hiring from outside NPS/NSA-MB especially during fourth quarters where the average number of accessions during fourth quarters has been high in the past.

d. Procurement/Supply Group

Series 1101 and 1105 are two of thirteen series within this group. Series 1101 is an unlikely candidate to receive transferred personnel because of the small attrition rate within the series. Only one person attrited from the series 1101 during the eight-year period. However, the forecasted stocks for the group reveal an overall decreasing trend during the three-year period because of high attrition in other series (see Figure 10.). If managers wish to transfer personnel to series 1105, it should occur during first quarters where, on the average, one 1105 attrites every quarter (see Appendix C.). To transfer personnel to this series during any other quarter would require a policy of decreased hires.

e. Public Works/Staff Group

Series 1152 and 1173 are two of five series within this group. The forecasted stocks for the group reveal an increasing trend during all twelve quarters although stock levels are lowest during third quarters (see Figure 11.). Based on the low attrition rates of all four quarters, including the second quarter attrition rate of 0%, transferring personnel to this group would appear to be difficult unless management intervenes to change the hiring patterns of this group. A "No Hires" policy would increase

the highest vacancies for series 1152 during first and third quarters. A similar policy for series 1173 would probably not create the necessary vacancies to transfer even one person during the three-year period.

f. Library Group

Series 1411 is one of two series within this group. The forecasted stocks for the group reveal a steady level (see Figure 13.). However, the attrition rates for this group are high, notably during second and fourth quarters. In fact, the high average number of attrites is mostly due to series 1411 (see Appendix C.). It appears the average number of accessions has been able to keep up with the average number of attrites as evidenced by the stability within the forecasted stocks. These high attrition rates make this group a strong candidate to receive transferred personnel.

g. Education/Training Group

Series 1702 is one of four series within this group. The forecasted stocks for the group reveal decreasing trends during all twelve quarters (see Figure 14.). The highest attrition rate for the group and for series 1702 is found in first quarters. In all four quarters, series 1702 has a higher average number of accessions than any other series (see Appendix E.). If transfers to this group and series are desired, managers should transfer personnel during first and

third quarters where the attrition rates are highest. Based on the forecast, managers can expect stocks to remain level between fourth and second quarters before they decrease again during third quarters and cyclically repeat.

4. Training and Skills Needed

The final step in the job comparison process is the identification of the training and skills needed to effectively transfer those personnel from jobs that may be eliminated to those jobs predicted to be left vacant due to attrition.

a. Clerical and Administrative Support Positions

According to the Handbook of Occupational Groups and Series and the Qualification Standards for General Schedule Positions, if a person is transferred from and to the same grade and series within this collection, not much training will be needed. Those personnel being transferred to series 0335, Computer Clerks may need training in the latest word processing systems and in software unfamiliar to them. Personnel transferring to series 0561, Budget Assistants may need training in budgeting and skills development in basic accounting. Personnel transferring into series 1411, Library Technician, will require a knowledge of library functions and services and the ability to apply library techniques and procedures. Specialized skills and knowledge of the

particular education or training activity involved are needed to transfer into series 1702, Education and Training Technician. Some people will require further training and qualifications after their transfer to certain job series. For example, in addition to a practical knowledge of commercial supply sources and business practices like sales, delivery, and shipment, those transferring into series 1105, Purchasing Agent will require Defense Acquisition Workforce Improvement Act (DAWIA) certification within 18 months of their transfer. Of course, much of the training and skills needed could be taught on the job. A better option might be to provide these personnel with some intensive short-term training that can be obtained through a variety of programs such as those offered by business and technical schools. Some training, such as accounting and budgeting, could even be obtained through courses given at NPS.

b. Administrative and Management Positions

According to the Handbook of Occupational Groups and Series and the Qualification Standards for General Schedule Positions, any person transferred from and to a GS-5 position and a series within this collection will need very little training. For GS-7 positions and above, if the person meets 100% of the educational requirements, the transfer should be relatively easy. However, if a person only meets 100% of the

requirements when the education and specialized experience requirements are combined, then his or her specialized experience will have to be reviewed to determine if the experience in the job being eliminated is compatible with the new job. Personnel transferring to series 0341, Administrative Officer will need to develop their managerial skills and have a background in at least two of the following:

- Series 0343, Management Analyst
- Series 0201, Personnel Management
- Series 0560, Budget Analyst

An understanding of agency mission, policies, and programs and a fundamental knowledge of analytical and evaluative methods will be needed for those personnel transferring to series 0343, Management Analyst, series 0501, Fiscal Analyst, and series 0560, Budget Analyst. Specialized skills and knowledge of the particular education or training activity involved are needed to transfer into series 1702, Education and Training Technician. Since every job series within this collection requires at least a bachelor's degree, it is possible that personnel who may be transferred already possess management skills obtained through formal education or through experience. However, if needed, much of this training could be provided by the Systems Management Department at NPS. In

fact, a Process Action Team (PAT) for Employee Development developed a Supervisor Education Matrix that lists, among other training, courses taught at NPS that could be beneficial in achieving the goals as set in an employee's Individual Development Plan (IDP). It would be up to supervisors to implement an IDP for each "new" employee and encourage them to attend these courses.

V. CONCLUSIONS AND RECOMMENDATIONS

The results of the forecasting and work analysis must be combined to give NPS/NSA-MB managers the information necessary and to offer some options available so they can make informed decisions as to how best to reduce the size of the workforce. This chapter will first attempt to provide solid conclusions as a result of the analysis performed in Chapters III and IV. Finally, some recommendations based on these conclusions and various interviews conducted with key members of the NEB, personnel managers, and supervisors will be presented for future discussion and argument.

A. CONCLUSIONS

During the period of fiscal years 1989-1996, quarterly attrition rates ranged from a low of 0% for Public Works/Staff to a high of 7.54% for Computer Operators/Specialists. In fact, a comparison of the average number of accessions with the average number of attritions seems to indicate that NPS and NSA-MB have little difficulty in filling their vacancies when they do occur, since most accessions were hired during the same quarter the attritions took place.

Based on average number of accessions, attrition rates, forecasted vacancies, and qualification similarities, the following jobs should be considered as those that may be able to receive transferred personnel from eliminated jobs:

- Series 0335, Computer Clerk and Assistant
- Series 0341, Administrative Officer
- Series 0343, Management Analyst
- Series 0501, Fiscal Analyst
- Series 0560, Budget Analyst
- Series 0561, Budget Assistant
- Series 1105, Purchasing Agent
- Series 1152, Production Controller
- Series 1411, Library Technician
- Series 1702, Education and Training Technician

The matrix in Table 19 lists the transfers recommended between job series that may be eliminated, listed in Chapter IV, and those that may be able to receive them. Cells marked with an "X" indicate where the transfers may be successful.

Neither the list nor the matrix are comprehensive. There may be personnel whose skills and expertise lie outside their current job series who may be qualified for immediate transfer to another job series. In these cases, little or no training would be needed to transfer them to other jobs at NPS/NSA-MB.

RECOMMENDED JOB TRANSFERS										
Jobs Which	Jobs To Receive Personnel									
May Be	Series	Series	Series	Series	Series	Series	Series	Series	Series	Series
Eliminated	O335	O341	O343	O501	O560	O561	1105	1152	1411	1702
Series 0081										
Series 0083										
Series 0201		X	X	X	X					X
Series 0203	X					X	X	X	X	X
Series 0230		X	X	X	X					X
Series 0235		X	X	X	X					X
Series 0260		X	X	X	X					X
Series 0303	X					X	X	X	X	X
Series 0361	X					X	X	X	X	X
Series 0525	X					X	X	X	X	X
Series 1106	X					X	X	X	X	X
Series 2005	X					X	X	X	X	X
Series 2102	X					X	X	X	X	X
Series 5803										
Series 5823										

Table 19. Recommended job transfers.

Additionally, as NPS continues to expand its resources and advance with technology, other jobs that may increase in future demand should also be considered. For example, the increased use of Distance Learning could generate a need for series 1071, Audio-Visual Production Specialists.

While the jobs listed in Table 19 may be able to receive some personnel from eliminated jobs, it is highly improbable that these personnel would include Firefighters, Police Officers, Heavy Mobile Equipment Mechanics, and Automotive Mechanics, series 0081, 0083, 5803, 5823, respectively. Their

skills are just too specialized and unsimilar to any other job available at NPS or NSA-MB. Even if jobs with similar requirements were available, it is questionable as to whether these people would want to change careers because of the job satisfaction in their respective fields.

Excluding firefighters, police officers, and mechanics, as of October 1, 1996, the total number of personnel in those jobs that may be eliminated was 167. This total includes 73 Administrative Support Assistants, 34 Accounting Technicians, and 23 Supply Technicians. While not all these personnel would be affected by a decrease in the labor force, what is uncertain is how many would have to be transferred if the decision to eliminate some jobs was made. While there are jobs that can receive these transferred personnel, an important question that needs to be answered is: "Will there be enough vacant jobs?".

B. RECOMMENDATIONS

It is important to point out that the forecast of stocks is based on past attrition and accession data. In other words, the stocks forecasted are what will occur if NPS/NSA-MB managers continue their past hiring practices. Given the results of the attrition model, it this researcher's belief that unless hiring practices are changed, there may be insufficient vacancies in the future. If attrition and

accessions continue as in the past, the most vacancies that can be expected during the three-year period is 22 for the six groups which contain the nine series recommended to receive transferred personnel. Since management is in control of its hiring practices, one option to consider is adopting a policy which decreases hiring, such as the "No Hires" scenario, in order to increase the amount of vacancies. If a "No Hires" policy was adopted for the groups which contain one of the "Jobs To Receive Personnel" series and if past attrition trends were to continue, management could expect, at a minimum, the following quarterly personnel vacancies:

- 1, Administrative Group
- 4, Computer Operators/Specialists Group
- 1, Financial Group
- 1/2, Public Works/Staff (1 every other quarter)
- 2, Procurement/Supply Group
- 1, Library Group
- 1, Education/Training Group

While the focus of the analysis in this study is on the decreases in personnel in jobs that may be able to receive transferred personnel, this same analysis could be applied to job series that may eventually be eliminated. If managers can determine whether NPS and NSA-MB can effectively function with

a reduced labor force of those jobs that are slated to be eliminated, a "No Hires" policy could also be implemented for these series and let attrition reduce the size of their force gradually. A policy of this kind would reduce the number of personnel needed to be transferred and needing training. Thereby, potential training costs could also be reduced.

For security and safety reasons, this policy would be difficult to implement with firefighters and police. However, firefighters at NPS and NSA-MB are being hired to replace vacancies on a temporary basis only. An overall policy of temporary hires for those jobs that may be eliminated may be an option to also consider until managers have more concrete knowledge of future job eliminations. Unfortunately, even if a policy of "No Hires" was implemented for mechanics, the fact that only one mechanic attrited during the eight-year period indicates the difficulty with decreasing the labor force of mechanics using this policy. The CNO message [Ref. 2] regarding outsourcing indicates motor vehicle maintenance jobs are at risk at all shore commands. Although, the CNO directive lessens the possibility of transferring them to other navy commands, other DoD commands should be considered as possible recipients of these mechanics, as well as the

firefighters and police officers. Of course, these command transfers only work if employees are willing to transfer to other parts of the state or country.

Supervisors may want to consider inquiring if firefighters, police officers, and mechanics show an interest in changing careers. Inquiries could be made through direct conversation or by examining personnel records. Although it would be a sacrifice to make a career change for these personnel, it may be a sacrifice they are willing to make in order to fulfill any remaining time needed to experience the benefits of retirement at age 55 with 30 years of federal service.

Finally, the attrition model formulated in Chapter III should be updated annually as newer data on stocks, attritions, and accessions become available. This will ensure a current three year forecast that contains updated attrition rates is available every year. Additionally, updated stocks can be examined to determine if managerial decisions are having the desired effect.

C. SUMMATION

Recent announcements by the Assistant Chief of Naval Personnel and the FY 1998 budget indicate that the Navy will continue to make the expenditures necessary to make the technological improvements in its weapons and platforms, even

if it is at the expense of its manpower strength. If reducing the numbers of officers and sailors is an option, there is no reason to think that Navy civilians are exempt from these cuts. Although there is little that NPS/NSA-MB management can do to prevent labor drawdowns on a national level, locally they can continue to anticipate and plan for contingencies. Effective planning at the operational and human resources levels will assist NPS and NSA-MB in achieving success in their academic and support missions.

APPENDIX A. GROUPED AND UNGROUPED JOB SERIES

<u>SAFETY, FIRE, AND POLICE GROUP</u>	
0018	Safety and Occupational Health Specialist
0028	Environmental Protection Specialist
0080	Security Specialist
0081	Firefighter
0083	Police Officer
0086	Security Assistant
<u>HRO PERSONNEL GROUP</u>	
0201	Personnel Management Specialist
0203	Personnel Assistant
0230	Employee Relations Specialist
0235	Employee Development Specialist
0260	Equal Employment Specialist
0261	Equal Opportunity Assistant
<u>ADMINISTRATIVE GROUP</u>	
0341	Administrative Officer
0342	Support Services Specialist
0343	Management Analyst
<u>COMPUTER OPERATORS/SPECIALISTS GROUP</u>	
0332	Computer Operator
0334	Computer Specialist
0335	Computer Clerk
<u>FINANCIAL GROUP</u>	
0501	Fiscal Analyst
0503	Fiscal Accounting Clerk
0505	Financial Manager
0510	Supervisory Staff Accountant
0525	Accounting Technician
0544	Payroll Clerk
0560	Supervisory Budget Analyst
0561	Budget Analyst
<u>ENGINEERS/TECHNICIANS GROUP</u>	
0801	General Engineer
0802	Aerospace Engineering Technician
0806	Materials Engineer
0809	Construction Representative
0810	Civil Engineer
0819	Environmental Engineer
0830	Mechanical Engineer
0850	Electrical Engineer
0854	Computer Engineer
0855	Electronics Engineer
0856	Electronics Technician
0861	Aerospace Engineer
0896	Industrial Engineer

PROCUREMENT/SUPPLY GROUP	
1101	Contract Surveillance Representative
1102	Procurement Analyst/Contract Specialist
1105	Purchasing Agent
1106	Procurement Technician
2005	Supply Technician
2010	Inventory Management Specialist
2030	Supervisory Distribution Facilities
2102	Transportation Assistant
2131	Freight Rate Specialist
2132	Travel Clerk
2134	Shipment Clerk
2135	Transportation Loss & Damage Claims
2150	Transportation Specialist
PUBLIC WORKS/STAFF GROUP	
1152	Production Controller
1173	Housing Management Specialist/Assistant
1601	Public Works Superintendent
1640	Facilities Manager
2151	Emergency Service Worker Dispatcher
SCIENCE/TECHNICAL GROUP	
1301	Physical Scientist
1306	Health Physicist
1310	Physicist
1311	Physical Science Technician
1321	Metallurgist
1340	Meteorologist
1341	Meteorological Technician
1360	Oceanographer
1372	Geodest
1515	Operations Research Analyst
1520	Mathematician
1530	Statistician
1550	Supervisory Computer Scientist
LIBRARY GROUP	
1410	Librarian
1411	Library Technician
EDUCATION/TRAINING GROUP	
1701	Education Development Specialist
1702	Educational Technician/Education Technician (Child Care)
1712	Training Officer
1750	Supervisory Instructional Systems Specialist

<u>WAGE GRADE/SUPERVISORS GROUP</u>	
2502	Telecommunications Mechanic
2604	Electronics Mechanic
2608	Electronic Digital Computer
2805	Electrician
2810	Electrician (High Voltage)
3414	Machinist
3502	Laborer
3604	Tile Setter
3703	Welder
4102	Painting Worker
4204	Pipefitter
4206	Plumber
4402	Bindery Worker
4417	Offset Press Operator
4604	Woodworker
4605	Wood Crafter
4607	Carpenter
4701	General Helper/Maintenance Supervisor
4714	Model Maker
4749	Maintenance Worker/Mechanic
4801	Toolroom Mechanic
4804	Locksmith
5001	Gardener Leader
5003	Gardener
5026	Pest Controller
5306	Air Conditioning Equipment Mechanic
5309	Boiler Plant Equipment Mechanic
5313	Elevator Mechanic
5378	Powered Support Systems Mechanic
5402	Boiler Plant Operator
5409	Water Treatment Plant Operator
5703	Motor Vehicle Operator
5705	Tractor Operator
5716	Engineering Equipment Operator
5803	Heavy Mobile Equipment Mechanic
5806	Mobile Equipment Servicer
5823	Automotive Mechanic
6907	Materials Handler
6910	Materials Expediter
6912	Material Sorter and Classifier
7002	Packing Inspector

NOT GROUPED	
O3O1	Supervisory Research Services Coordinator
O3O1	Director of Admissions
O3O1	Research Activities Coordinator
O3O1	Total Quality Leadership Specialist
O3O1	Marketing/Special Projects Coordinator
O3O1	Director of Administrative Services
O3O1	Information Systems Analyst
O3O1	Research Program Supervisor
O3O1	Information & Referral Specialist
O3O1	Supervisory Audio-Visual Specialist
O3O1	Director, Academic & Administrative Programs
O3O1	Academic Services Manager
O3O1	Research Associate
O3O1	Supervisory Research Services Coordinator
O3O1	Assistant Registrar
O3O1	Administrative Support Specialist
O3O1	Information Management Specialist
O3O3	Administrative Clerk
O3O3	Administrative Support Assistant
O3O3	International Program Assistant
O3O3	Supervisory Administrative Support Assistant
O3O3	Administrative Assistant
O3O3	Family Advocacy Assistant
O3O3	Clerk
O3O3	International Activities Assistant
O3O3	Resource Management Assistant
O3O3	Timekeeper
O3O3	Research Assistant
O3O3	Research Clerk
O3O3	Child Development Center Clerk
O3O3	Research Administration Assistant
O3O3	Traffic Administration Clerk
O3O3	Travel & Office Assistant
O3O3	Secretary
O3O3	Occupational Safety & Health Resource Manager
O3O3	Message & Travel Assistant
O3O3	Vehicle Registration Clerk
O3O3	Assistant Class Scheduler
O3O5	Mail Clerk
O318	Secretary
O326	Office Automation Assistant/Clerk

APPENDIX B. STOCKS

Job Series	SAFETY, FIRE, AND POLICE STOCKS								Stock Totals	Average Stock
	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
Quarter 1										
OO18	1	4	4	3	3	4	4	4	27	3.38
OO28	0	0	0	1	2	3	4	4	14	1.75
OO80	2	2	2	2	2	5	1	3	19	2.38
OO81	25	26	21	26	25	35	27	49	234	29.25
OO83	19	19	23	20	20	19	22	18	160	20
OO86	2	2	3	5	3	2	1	1	19	2.38
Total	49	53	53	57	55	68	59	79	473	59.13
Quarter 2										
OO18	2	4	4	3	4	3	4	4	28	3.5
OO28	0	0	1	1	2	4	4	4	16	2
OO80	2	2	2	2	3	1	2	3	17	2.13
OO81	25	23	22	24	25	28	48	48	243	30.38
OO83	18	20	21	20	12	21	22	21	155	19.38
OO86	2	3	3	4	2	3	1	1	19	2.38
Total	49	52	53	54	48	60	81	81	478	59.75
Quarter 3										
OO18	2	3	3	3	4	4	4	4	27	3.38
OO28	0	0	1	1	2	4	4	5	17	2.13
OO80	2	2	2	2	3	1	2	2	16	2
OO81	23	23	25	25	28	27	50	44	245	30.63
OO83	18	19	21	20	11	21	23	19	152	19
OO86	2	3	4	4	2	3	1	1	20	2.5
Total	47	50	56	55	50	60	84	75	477	59.63
Quarter 4										
OO18	2	3	3	3	4	4	4	4	27	3.38
OO28	0	0	1	2	2	4	4	5	18	2.25
OO80	2	2	2	3	5	1	3	3	21	2.63
OO81	26	23	25	26	35	27	50	47	259	32.38
OO83	17	21	22	18	19	22	19	21	159	19.88
OO86	2	2	4	4	2	2	1	1	18	2.25
Total	49	51	57	56	67	60	81	81	502	62.75

Job Series	HRO PERSONNEL STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O201	9	7	6	6	5	6	8	4	51	6.38
O203	7	8	10	12	11	12	12	14	86	10.75
O230	0	0	1	1	2	3	3	3	13	1.63
O235	0	0	1	1	1	1	1	1	6	0.75
O260	1	0	1	1	2	2	2	1	10	1.25
O361	1	1	1	1	0	0	1	1	6	0.75
Total	18	16	20	22	21	24	27	24	172	21.5
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O201	9	8	6	6	5	7	8	7	56	7
O203	7	9	12	13	12	9	14	10	86	10.75
O230	0	0	1	1	3	3	3	3	14	1.75
O235	0	0	1	1	1	1	1	1	6	0.75
O260	1	0	1	1	2	2	2	2	11	1.38
O361	1	1	1	1	0	1	1	1	7	0.88
Total	18	18	22	23	23	23	29	24	180	22.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O201	9	8	7	6	6	7	8	7	58	7.25
O203	7	7	11	13	9	9	14	10	80	10
O230	0	0	1	0	4	3	3	3	14	1.75
O235	0	0	1	1	1	1	1	1	6	0.75
O260	1	0	1	1	2	2	2	2	11	1.38
O361	1	1	1	0	0	1	1	1	6	0.75
Total	18	16	22	21	22	23	29	24	175	21.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O201	7	7	7	6	6	8	5	7	53	6.63
O203	7	8	10	14	12	10	14	10	85	10.63
O230	0	0	1	0	4	3	3	3	14	1.75
O235	0	0	1	1	1	1	1	1	6	0.75
O260	0	0	1	1	2	2	2	2	10	1.25
O361	1	1	1	0		1	1	1	6	0.75
Total	15	16	21	22	25	25	26	24	174	21.75

Job Series	ADMINISTRATIVE STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O341	1	1	2	2	4	5	3	7	25	3.13
O342	2	2	7	8	7	6	3	2	37	4.63
O343	1	2	2	2	2	3	3	4	19	2.38
Total	4	5	11	12	13	14	9	13	81	10.13
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O341	1	1	2	3	2	4	6	5	24	3
O342	1	3	7	8	6	5	2	4	36	4.5
O343	2	2	2	2	3	3	3	5	22	2.75
Total	4	6	11	13	11	12	11	14	82	10.25
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O341	1	1	2	3	4	4	7	5	27	3.38
O342	1	3	7	8	6	5	2	4	36	4.5
O343	2	2	2	2	3	3	4	8	26	3.25
Total	4	6	11	13	13	12	13	17	89	11.13
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O341	1	1	2	3	5	4	7	5	28	3.5
O342	1	3	7	8	7	4	2	4	36	4.5
O343	2	2	2	3	3	3	4	8	27	3.38
Total	4	6	11	14	15	11	13	17	91	11.38

Job Series	COMPUTER OPERATORS/SPECIALISTS STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	StockTotals	Average Stock
O332	10	8	11	10	9	9	7	7	71	8.88
O334	41	44	44	50	59	68	62	68	436	54.5
O335	2	7	3	3	8	7	5	0	35	4.38
Total	53	59	58	63	76	84	74	75	542	67.75
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	StockTotals	Average Stock
O332	9	9	11	10	8	8	7	8	70	8.75
O334	40	43	51	51	63	61	65	73	447	55.88
O335	3	8	3	3	3	4	3	2	29	3.63
Total	52	60	65	64	74	73	75	83	546	68.25
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	StockTotals	Average Stock
O332	8	9	12	10	8	8	7	8	70	8.75
O334	42	43	51	50	60	59	68	77	450	56.25
O335	3	7	3	3	4	4	2	3	29	3.63
Total	53	59	66	63	72	71	77	88	549	68.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	StockTotals	Average Stock
O332	9	9	12	11	9	8	7	8	73	9.13
O334	44	39	52	52	70	61	71	75	464	58
O335	6	8	4	11	10	6	7	8	60	7.5
Total	59	56	68	74	89	75	85	91	597	74.63

Job Series	FINANCIAL STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stocks
O501	6	6	8	9	10	10	9	9	67	8.38
O503	4	1	4	3	0	0	1	0	13	1.63
O505	1	1	2	2	2	2	2	3	15	1.88
O510	0	0	0	0	0	0	1	2	3	0.38
O525	18	18	22	20	24	30	30	31	193	24.13
O544	0	0	0	0	1	1	0	1	3	0.38
O560	2	3	0	1	3	1	2	2	14	1.75
O561	2	0	1	1	1	2	1	7	15	1.88
Total	33	29	37	36	41	46	46	55	323	40.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stocks
O501	6	6	8	9	10	9	9	12	69	8.63
O503	2	2	4	3	0	1	0	0	12	1.5
O505	1	1	2	2	2	2	2	2	14	1.75
O510	0	0	0	0	0	0	1	2	3	0.38
O525	17	19	23	20	23	27	31	34	194	24.25
O544	0	0	0	0	1	1	0	1	3	0.38
O560	3	3	0	1	2	2	2	2	15	1.88
O561	2	1	1	1	2	1	5	6	19	2.38
Total	31	32	38	36	40	43	50	59	329	41.13
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stocks
O501	6	6	8	9	10	9	10	12	70	8.75
O503	3	2	4	3	0	1	0	0	13	1.63
O505	1	1	2	2	2	2	2	2	14	1.75
O510	0	0	0	0	0	0	1	2	3	0.38
O525	18	17	23	22	26	27	31	34	198	24.75
O544	0	0	0	0	1	1	0	1	3	0.38
O560	3	3	0	1	2	2	2	2	15	1.88
O561	2	1	1	1	2	1	5	6	19	2.38
Total	33	30	38	38	43	43	51	59	335	41.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stocks
O501	6	6	8	9	10	9	10	12	70	8.75
O503	3	2	3	3	0	1	0	0	12	1.5
O505	1	1	2	2	2	2	2	2	14	1.75
O510	0	0	0	0	0	0	1	2	3	0.38
O525	16	17	19	22	31	28	32	33	198	24.75
O544	0	0	0	0	1	1	0	1	3	0.38
O560	3	3	1	1	2	2	2	2	16	2
O561	1	1	1	1	2	2	5	6	19	2.38
Total	30	30	34	38	48	45	52	58	335	41.88

Job Series	ENGINEERS/TECHNICIANS STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O801	3	5	5	6	6	11	6	8	50	6.25
O802	8	7	10	11	12	13	14	16	91	11.38
O806	0	0	1	1	2	3	2	2	11	1.38
O809	0	0	1	1	2	0	1	1	6	0.75
O810	1	0	1	1	1	1	1	4	10	1.25
O819	1	0	0	0	0	0	0	0	1	0.13
O830	4	3	3	4	4	3	3	5	29	3.63
O850	0	1	1	1	1	1	1	2	8	1
O854	0	0	1	1	2	3	3	5	15	1.88
O855	6	9	8	9	10	14	8	8	72	9
O856	18	17	17	20	17	18	16	15	138	17.25
O861	3	4	3	4	2	4	3	3	26	3.25
O896	0	0	0	0	1	2	0	0	3	0.38
Total	44	46	51	59	60	73	58	69	460	57.5
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O801	4	5	5	5	6	7	8	8	48	6
O802	8	7	10	11	10	10	15	13	84	10.5
O806	0	0	1	1	2	2	2	1	9	1.13
O809	0	0	1	1	2	1	1	2	8	1
O810	1	0	1	1	1	1	3	3	11	1.38
O819	1	0	0	0	0	0	0	0	1	0.13
O830	4	3	3	4	4	3	4	4	29	3.63
O850	1	1	1	1	0	1	2	2	9	1.13
O854	0	0	1	1	2	3	4	5	16	2
O855	7	8	8	9	10	9	8	9	68	8.5
O856	17	15	18	22	16	16	14	15	133	16.63
O861	3	4	3	4	2	3	2	4	25	3.13
O896	0	0	0	0	1	1	0	0	2	0.25
Total	46	43	52	60	56	57	63	66	443	55.38

Job Series	ENGINEERS/TECHNICIANS STOCKS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O801	5	5	5	5	8	6	8	10	52	6.5
O802	7	7	9	9	10	10	15	14	81	10.13
O806	0	0	1	1	2	2	2	1	9	1.13
O809	0	1	1	1	1	1	1	2	8	1
O810	0	0	1	1	1	2	3	3	11	1.38
O819	0	0	0	0	0	0	0	0	0	0
O830	3	3	4	4	3	3	5	4	29	3.63
O850	1	1	1	1	1	1	2	2	10	1.25
O854	0	0	1	1	3	3	4	4	16	2
O855	8	8	9	9	10	10	8	9	71	8.88
O856	18	16	18	21	15	15	14	14	131	16.38
O861	3	4	3	4	2	3	2	4	25	3.13
O896	0	0	0	0	1	1	0	0	2	0.25
Total	45	45	53	57	57	57	64	67	445	55.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
O801	5	5	5	5	11	6	8	10	55	6.88
O802	7	10	12	11	13	12	16	14	95	11.88
O806	0	1	1	2	3	2	2	1	12	1.5
O809	0	1	1	2	0	1	1	2	8	1
O810	0	0	1	1	1	1	3	3	10	1.25
O819	0	0	0	0	0	0	0	0	0	0
O830	3	3	4	4	3	3	5	4	29	3.63
O850	1	1	1	1	1	1	2	3	11	1.38
O854	0	0	1	1	3	3	5	3	16	2
O855	8	8	9	8	14	9	8	9	73	9.13
O856	17	15	20	20	19	16	16	15	138	17.25
O861	3	4	4	3	4	3	3	4	28	3.5
O896	0	0	0	0	2	0	0	0	2	0.25
Total	44	48	59	58	74	57	69	68	477	59.63

Job Series	PROCUREMENT/SUPPLY STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1101	2	2	2	2	4	3	3	4	22	2.75
1102	2	2	5	3	6	8	6	30	62	7.75
1105	8	8	8	8	8	10	8	9	67	8.38
1106	2	3	2	2	4	7	4	3	27	3.38
2005	5	5	19	17	24	23	19	26	138	17.25
2010	3	2	1	1	1	1	1	1	11	1.38
2030	0	0	0	1	1	1	1	1	5	0.63
2102	0	0	0	0	0	1	4	11	16	2
2131	1	1	1	1	1	1	1	1	8	1
2132	1	1	5	6	3	6	0	0	22	2.75
2134	6	5	6	7	6	6	6	0	42	5.25
2135	1	0	1	1	1	1	1	1	7	0.88
2150	0	0	0	1	1	1	1	1	5	0.63
Total	31	29	50	50	60	69	55	88	432	54
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1101	2	2	2	2	3	3	4	3	21	2.63
1102	2	2	5	3	7	6	32	29	86	10.75
1105	8	10	7	8	8	9	9	8	67	8.38
1106	3	4	4	2	5	4	1	1	24	3
2005	5	7	20	17	23	18	23	22	135	16.88
2010	3	2	1	1	1	1	1	1	11	1.38
2030	0	0	1	1	1	1	1	1	6	0.75
2102	0	0	0	0	0	5	10	10	25	3.13
2131	1	1	1	1	2	1	1	1	9	1.13
2132	1	1	5	6	5	1	0	0	19	2.38
2134	5	5	6	7	5	6	0	0	34	4.25
2135	0	0	1	1	1	1	1	1	6	0.75
2150	0	0	0	1	1	1	1	1	5	0.63
Total	30	34	53	50	62	57	84	78	448	56

Job Series	PROCUREMENT/SUPPLY STOCKS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1101	2	2	2	3	3	3	4	2	21	2.63
1102	2	2	4	4	7	6	33	34	92	11.5
1105	8	9	7	6	9	9	9	8	65	8.13
1106	2	3	2	3	5	4	2	2	23	2.88
2005	4	4	20	13	21	19	24	22	127	15.88
2010	2	2	1	1	1	1	1	1	10	1.25
2030	0	0	1	1	1	1	1	1	6	0.75
2102	0	0	0	0	0	4	10	12	26	3.25
2131	1	1	1	1	1	1	1	1	8	1
2132	1	1	5	6	5	0	0	0	18	2.25
2134	5	4	6	7	6	6	0	0	34	4.25
2135	0	0	1	1	1	1	1	1	6	0.75
2150	0	0	0	1	1	1	1	1	5	0.63
Total	27	28	50	47	61	56	87	85	441	55.13
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1101	2	2	2	1	3	3	4	3	20	2.5
1102	2	2	3	4	9	7	32	33	92	11.5
1105	8	9	6	7	10	9	9	7	65	8.13
1106	4	3	2	3	6	4	2	1	25	3.13
2005	4	4	18	14	24	18	24	23	129	16.13
2010	2	2	1	1	1	1	1	1	10	1.25
2030	0	0	1	1	1	1	1	1	6	0.75
2102	0	0	0	0	1	4	11	12	28	3.5
2131	1	1	1	1	1	1	1	1	8	1
2132	1	1	5	6	6	0	0	0	19	2.38
2134	5	4	5	7	6	6	0	0	33	4.13
2135	0	0	1	1	1	1	1	1	6	0.75
2150	0	0	0	1	1	1	1	1	5	0.63
Total	29	28	45	47	70	56	87	84	446	55.75

Job Series	PUBLIC WORKS/STAFF STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1152	5	0	5	8	4	6	6	11	45	5.63
1173	5	6	6	6	5	7	10	17	62	7.75
1601	0	0	0	0	0	0	0	1	1	0.13
1640	0	0	0	0	0	0	0	2	2	0.25
2151	0	0	0	0	0	0	0	0	0	0
Total	10	6	11	14	9	13	16	31	110	13.75
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1152	5	1	4	5	4	6	11	9	45	5.63
1173	6	6	6	6	5	5	15	16	65	8.13
1601	0	0	0	0	0	0	1	1	2	0.25
1640	0	0	0	0	0	0	1	1	2	0.25
2151	0	0	0	0	0	0	0	1	1	0.13
Total	11	7	10	11	9	11	28	28	115	14.38
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1152	2	2	6	4	5	6	11	10	46	5.75
1173	6	6	6	6	5	5	16	18	68	8.5
1601	0	0	0	0	0	0	2	1	3	0.38
1640	0	0	0	0	0	0	1	1	2	0.25
2151	0	0	0	0	0	0	0	1	1	0.13
Total	8	8	12	10	10	11	30	31	120	15
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1152	1	1	6	5	6	6	11	10	46	5.75
1173	6	6	6	5	7	5	17	19	71	8.88
1601	0	0	0	0	0	0	1	1	2	0.25
1640	0	0	0	0	0	0	2	1	3	0.38
2151	0	0	0	0	0	0	0	1	1	0.13
Total	7	7	12	10	13	11	31	32	123	15.38

Job Series	SCIENCE/TECHNICAL STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1301	5	5	9	7	7	10	6	4	53	6.63
1306	0	0	0	1	1	2	1	1	6	0.75
1310	6	6	5	3	6	4	4	5	39	4.88
1311	4	4	1	4	3	1	4	3	24	3
1321	1	1	0	0	0	0	0	0	2	0.25
1340	12	8	9	10	10	11	9	11	80	10
1341	3	2	2	3	1	1	1	1	14	1.75
1360	8	8	10	11	9	15	10	10	81	10.13
1372	1	1	1	1	0	0	0	0	4	0.5
1515	0	0	0	1	0	0	0	1	2	0.25
1520	4	4	3	2	4	7	5	5	34	4.25
1530	1	1	1	1	1	1	1	1	8	1
1550	0	0	0	0	0	0	0	0	0	0
Total	45	40	41	44	42	52	41	42	347	43.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1301	5	6	9	7	6	6	4	4	47	5.88
1306	0	0	0	0	1	1	1	1	4	0.5
1310	6	6	3	3	4	4	4	5	35	4.38
1311	3	5	1	2	2	2	4	3	22	2.75
1321	1	1	0	0	0	0	0	0	2	0.25
1340	12	8	10	10	8	8	9	9	74	9.25
1341	3	1	2	2	1	1	1	1	12	1.5
1360	8	7	10	12	11	9	10	10	77	9.63
1372	1	1	1	1	0	0	0	0	4	0.5
1515	0	0	0	1	0	0	0	1	2	0.25
1520	4	4	3	1	4	5	5	4	30	3.75
1530	1	1	1	1	1	1	1	1	8	1
1550	0	0	0	0	0	0	0	2	2	0.25
Total	44	40	40	40	38	37	39	41	319	39.88

Job Series	SCIENCE/TECHNICAL STOCKS								Stock Totals	Average Stock
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
1301	2	5	8	8	5	6	4	4	42	5.25
1306	0	0	0	0	1	1	1	1	4	0.5
1310	6	6	3	3	4	4	4	5	35	4.38
1311	1	5	1	2	1	2	3	3	18	2.25
1321	1	1	0	0	0	0	0	0	2	0.25
1340	12	8	10	10	9	8	9	9	75	9.38
1341	3	1	2	2	1	1	1	1	12	1.5
1360	7	8	10	12	10	9	10	10	76	9.5
1372	1	1	1	1	0	0	0	0	4	0.5
1515	0	0	0	1	0	0	0	1	2	0.25
1520	4	4	2	1	4	5	5	4	29	3.63
1530	1	1	1	1	1	1	1	1	8	1
1550	0	0	0	0	0	0	0	2	2	0.25
Total	38	40	38	41	36	37	38	41	309	38.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1301	4	3	8	7	10	7	4	4	47	5.88
1306	0	0	1	1	2	1	1	1	7	0.88
1310	6	6	3	3	4	4	5	5	36	4.5
1311	3	3	3	3	5	4	5	5	31	3.88
1321	1	1	0	0	0	0	0	0	2	0.25
1340	9	8	9	10	12	9	11	9	77	9.63
1341	2	1	3	1	1	1	1	1	11	1.38
1360	6	8	11	12	16	10	10	9	82	10.25
1372	1	1	1	1	0	0	0	0	4	0.5
1515	0	0	1	1	0	0	0	1	3	0.38
1520	4	4	2	1	6	5	5	4	31	3.88
1530	1	1	1	1	1	1	1	1	8	1
1550	0	0	0	0	0	0	0	2	2	0.25
Total	37	36	43	41	57	42	43	42	341	42.63

Job Series	LIBRARY STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1410	12	14	13	15	16	19	14	12	115	14.38
1411	6	7	8	14	17	23	11	15	101	12.63
Total	18	21	21	29	33	42	25	27	216	27
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1410	12	15	13	14	16	16	15	14	115	14.38
1411	6	8	8	14	15	10	14	14	89	11.13
Total	18	23	21	28	31	26	29	28	204	25.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1410	13	15	14	15	16	15	15	15	118	14.75
1411	6	6	9	16	15	10	14	14	90	11.25
Total	19	21	23	31	31	25	29	29	208	26
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1410	15	14	15	16	19	14	15	14	122	15.25
1411	7	6	11	14	25	11	15	14	103	12.88
Total	22	20	26	30	44	25	30	28	225	28.13

Job Series	EDUCATION/TRAINING STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1701	1	1	1	1	2	1	1	5	13	1.63
1702	13	10	20	20	32	44	38	41	218	27.25
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	1	1	0.13
Total	14	11	21	21	34	45	39	47	232	29
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1701	1	1	1	2	2	1	5	4	17	2.13
1702	12	10	21	23	34	39	42	43	224	28
1712	0	0	0	0	0	0	0	1	1	0.13
1750	0	0	0	0	0	0	1	1	2	0.25
Total	13	11	22	25	36	40	48	49	244	30.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1701	1	1	1	2	2	1	5	4	17	2.13
1702	11	9	20	25	38	40	42	44	229	28.63
1712	0	0	0	0	0	0	0	1	1	0.13
1750	0	0	0	0	0	0	1	1	2	0.25
Total	12	10	21	27	40	41	48	50	249	31.13
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
1701	1	1	1	2	1	1	5	4	16	2
1702	11	10	20	25	43	39	42	44	234	29.25
1712	0	0	0	0	0	0	0	1	1	0.13
1750	0	0	0	0	0	0	1	1	2	0.25
Total	12	11	21	27	44	40	48	50	253	31.63

Job Series	WAGE GRADE/SUPERVISORS STOCKS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
2502	1	2	2	2	1	2	0	0	10	1.25
2604	4	4	3	2	2	2	2	3	22	2.75
2608	0	1	2	1	1	1	1	1	8	1
2805	8	7	6	6	7	6	12	16	68	8.5
2810	0	0	0	0	0	0	2	6	8	1
3414	2	2	2	2	3	2	2	1	16	2
3502	7	9	9	7	8	18	12	23	93	11.63
3604	1	1	1	1	1	1	0	0	6	0.75
3703	0	0	0	0	0	0	0	1	1	0.13
4102	4	3	1	1	1	1	1	3	15	1.88
4204	3	3	3	3	3	2	6	9	32	4
4206	2	1	0	1	2	2	4	5	17	2.13
4402	2	2	1	0	0	0	0	0	5	0.63
4417	2	2	2	2	0	0	0	0	8	1
4604	2	2	3	3	1	3	2	3	19	2.38
4605	1	0	0	0	0	0	0	0	1	0.13
4607	5	4	4	3	4	5	7	12	44	5.5
4701	14	15	14	13	12	10	22	24	124	15.5
4714	8	7	7	7	7	6	7	8	57	7.13
4749	16	16	19	16	17	22	18	58	182	22.75
4801	2	1	1	1	2	4	5	8	24	3
4804	2	2	2	2	2	2	2	4	18	2.25
5001	0	0	0	0	0	0	1	2	3	0.38
5003	4	4	3	3	4	4	4	1	27	3.38
5026	1	1	1	1	0	1	1	0	6	0.75
5306	3	3	3	3	4	4	4	8	32	4
5309	0	0	0	0	0	0	0	1	1	0.13
5313	1	1	1	1	1	1	1	1	8	1
5378	0	0	1	1	1	1	1	1	6	0.75
5402	4	8	7	6	5	5	6	11	52	6.5
5409	0	0	0	0	0	0	0	4	4	0.5
5703	5	6	2	5	3	3	5	3	32	4
5705	0	0	0	0	0	0	0	1	1	0.13
5716	2	1	2	2	1	2	2	3	15	1.88
5803	1	1	1	0	1	1	3	4	12	1.5
5806	1	1	0	0	0	0	0	0	2	0.25
5823	1	1	1	1	1	1	2	3	11	1.38
6907	4	4	4	4	5	6	5	6	38	4.75
6910	0	0	0	0	1	0	1	1	3	0.38
6912	1	1	1	1	1	2	0	0	7	0.88
7002	2	3	2	2	2	2	0	1	14	1.75
Total	116	119	111	103	104	122	141	236	1052	131.5

Job Series	WAGE GRADE/SUPERVISORS STOCKS									
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
2502	1	2	2	2	1	0	0	0	8	1
2604	4	4	3	2	2	2	3	2	22	2.75
2608	1	1	2	1	1	1	1	1	9	1.13
2805	8	7	6	7	7	8	16	15	74	9.25
2810	0	0	0	0	0	0	6	6	12	1.5
3414	2	2	2	2	3	1	1	3	16	2
3502	12	8	8	7	7	10	20	20	92	11.5
3604	1	1	1	1	1	0	0	0	5	0.63
3703	0	0	0	0	0	0	1	1	2	0.25
4102	4	2	1	1	1	1	2	3	15	1.88
4204	3	3	3	3	3	2	9	8	34	4.25
4206	1	1	0	2	2	2	6	5	19	2.38
4402	2	2	0	0	0	0	0	0	4	0.5
4417	2	2	2	2	0	0	0	0	8	1
4604	2	3	3	3	3	2	3	2	21	2.63
4605	1	0	0	0	0	0	0	0	1	0.13
4607	5	4	2	3	4	7	14	14	53	6.63
4701	14	15	14	14	13	16	21	23	130	16.25
4714	8	7	7	7	7	7	7	6	56	7
4749	17	16	19	15	16	19	47	58	207	25.88
4801	1	1	1	1	4	4	8	7	27	3.38
4804	2	2	2	2	3	2	4	4	21	2.63
5001	0	0	0	0	0	0	1	1	2	0.25
5003	4	4	3	4	4	4	3	3	29	3.63
5026	1	1	1	1	1	1	0	0	6	0.75
5306	2	4	3	4	4	4	7	8	36	4.5
5309	0	0	0	0	0	0	1	0	1	0.13
5313	1	1	1	1	1	1	1	2	9	1.13
5378	0	1	1	1	1	1	1	1	7	0.88
5402	5	8	6	6	4	6	8	12	55	6.88
5409	0	0	0	0	0	0	4	4	8	1
5703	6	5	5	5	2	4	3	4	34	4.25
5705	0	0	0	0	0	0	1	1	2	0.25
5716	1	1	2	2	2	2	4	4	18	2.25
5803	1	1	1	0	1	1	5	4	14	1.75
5806	1	1	0	0	0	0	0	0	2	0.25
5823	1	1	1	1	2	1	3	3	13	1.63
6907	4	4	3	3	5	5	7	6	37	4.63
6910	0	0	0	0	1	1	1	1	4	0.5
6912	1	1	1	1	1	0	0	0	5	0.63
7002	2	3	2	2	2	0	1	1	13	1.63
Total	121	119	108	106	109	115	220	233	1131	141.38

Job Series	WAGE GRADE/SUPERVISORS STOCKS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
2502	1	2	2	1	2	0	0	0	8	1
2604	4	4	2	2	2	2	3	2	21	2.63
2608	1	1	2	1	1	1	1	1	9	1.13
2805	8	7	6	7	5	8	16	17	74	9.25
2810	0	0	0	0	0	0	6	6	12	1.5
3414	2	2	2	2	2	1	1	3	15	1.88
3502	13	7	7	6	9	10	20	20	92	11.5
3604	1	1	1	1	1	0	0	0	5	0.63
3703	0	0	0	0	0	0	1	1	2	0.25
4102	3	2	1	1	1	1	2	3	14	1.75
4204	3	3	4	3	2	2	9	8	34	4.25
4206	2	1	0	2	2	2	5	5	19	2.38
4402	2	2	0	0	0	0	0	0	4	0.5
4417	2	2	2	2	0	0	0	0	8	1
4604	2	3	3	3	3	2	3	2	21	2.63
4605	0	0	0	0	0	0	0	0	0	0
4607	6	4	2	2	6	7	14	13	54	6.75
4701	15	14	14	13	10	16	21	24	127	15.88
4714	7	7	7	7	6	7	7	6	54	6.75
4749	16	16	19	15	18	19	49	58	210	26.25
4801	1	1	1	1	4	4	8	7	27	3.38
4804	2	2	2	2	3	2	4	4	21	2.63
5001	0	0	0	0	0	0	1	1	2	0.25
5003	3	4	3	4	4	4	2	3	27	3.38
5026	1	1	1	1	1	1	0	0	6	0.75
5306	2	4	3	4	4	4	7	8	36	4.5
5309	0	0	0	0	0	0	1	0	1	0.13
5313	1	1	1	1	1	1	1	2	9	1.13
5378	0	1	1	1	1	1	1	1	7	0.88
5402	6	8	6	6	5	6	9	12	58	7.25
5409	0	0	0	0	0	0	4	4	8	1
5703	6	5	5	5	2	4	3	4	34	4.25
5705	0	0	0	0	0	0	1	1	2	0.25
5716	1	1	2	2	2	2	3	4	17	2.13
5803	1	0	1	0	1	1	5	4	13	1.63
5806	1	1	0	0	0	0	0	0	2	0.25
5823	1	1	1	1	1	1	3	3	12	1.5
6907	4	4	3	3	6	5	7	6	38	4.75
6910	0	0	0	0	0	1	1	1	3	0.38
6912	1	1	1	1	2	0	0	0	6	0.75
7002	2	3	2	2	2	0	1	1	13	1.63
Total	121	116	107	102	109	115	220	235	1125	140.63

Job Series	WAGE GRADE/SUPERVISORS STOCKS									
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Stock Totals	Average Stock
2502	2	2	2	1	2	0	0	0	9	1.13
2604	4	4	2	2	2	2	3	2	21	2.63
2608	1	1	2	1	1	1	1	1	9	1.13
2805	8	7	7	6	6	8	16	17	75	9.38
2810	0	0	0	0	0	0	6	6	12	1.5
3414	2	2	2	2	2	2	1	3	16	2
3502	11	8	8	8	16	11	24	19	105	13.13
3604	1	1	1	1	1	0	0	0	5	0.63
3703	0	0	0	0	0	0	1	1	2	0.25
4102	3	2	1	1	1	1	2	3	14	1.75
4204	3	3	3	3	2	2	9	8	33	4.13
4206	1	1	0	2	2	2	4	5	17	2.13
4402	2	2	0	0	0	0	0	0	4	0.5
4417	2	2	2	1	0	0	0	0	7	0.88
4604	2	3	3	3	3	2	3	2	21	2.63
4605	0	0	0	0	0	0	0	0	0	0
4607	5	3	3	4	5	7	14	13	54	6.75
4701	16	13	13	15	11	17	22	23	130	16.25
4714	7	7	7	6	6	7	8	6	54	6.75
4749	17	16	18	17	21	18	49	58	214	26.75
4801	0	1	1	1	4	4	8	7	26	3.25
4804	2	2	2	2	2	2	4	4	20	2.5
5001	0	0	0	0	0	1	1	1	3	0.38
5003	3	4	3	4	4	4	2	3	27	3.38
5026	1	1	1	1	1	1	0	0	6	0.75
5306	2	2	3	4	4	4	7	8	34	4.25
5309	0	0	0	0	0	0	1	0	1	0.13
5313	1	0	1	1	1	1	1	2	8	1
5378	0	1	1	1	1	1	1	1	7	0.88
5402	6	8	6	6	5	6	9	10	56	7
5409	0	0	0	0	0	0	4	4	8	1
5703	6	5	5	4	3	5	3	4	35	4.38
5705	0	0	0	0	0	0	1	1	2	0.25
5716	1	1	2	2	2	2	3	4	17	2.13
5803	1	1	0	0	1	3	4	4	14	1.75
5806	1	1	0	0	0	0	0	0	2	0.25
5823	1	1	1	1	1	1	3	3	12	1.5
6904	0	0	0	0	0	0	0	0	0	0
6907	4	4	4	3	6	5	7	6	39	4.88
6910	0	0	0	0	0	1	1	1	3	0.38
6912	1	1	1	1	2	0	0	0	6	0.75
7002	2	3	2	2	2	0	1	1	13	1.63
Total	119	113	107	106	120	121	224	231	1141	142.63

APPENDIX C. ATTRITES

Job Series	SAFETY, FIRE, AND POLICE ATTRITES								Attrite Totals	Average Attrites
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
OO18	0	0	0	0	0	0	0	0	0	0
OO28	0	0	0	0	0	0	0	0	0	0
OO80	0	0	0	0	0	0	0	0	0	0
OO81	1	2	3	1	0	0	0	2	9	1.13
OO83	3	1	2	2	0	0	0	1	9	1.13
OO86	0	0	1	0	0	0	0	0	1	0.13
Total	4	3	6	3	0	0	0	3	19	2.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
OO18	0	1	0	0	0	0	0	0	1	0.13
OO28	0	0	0	0	0	0	0	0	0	0
OO80	0	0	0	0	0	0	0	1	1	0.13
OO81	4	1	0	2	0	1	0	1	9	1.13
OO83	1	1	1	1	1	1	0	2	8	1
OO86	0	1	0	0	0	0	0	0	1	0.13
Total	5	4	1	3	1	2	0	4	20	2.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
OO18	0	0	0	0	1	0	0	0	1	0.13
OO28	0	0	0	0	0	0	0	0	0	0
OO80	0	0	0	0	0	0	0	1	1	0.13
OO81	0	0	1	0	1	0	1	1	4	0.5
OO83	2	1	0	1	2	0	3	0	9	1.13
OO86	0	0	0	1	0	2	0	0	3	0.38
Total	2	1	1	2	4	2	4	2	18	2.25
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
OO18	0	1	0	1	1	0	0	0	3	0.38
OO28	0	0	0	0	0	0	0	0	0	0
OO80	0	0	0	0	0	0	0	0	0	0
OO81	1	2	0	0	1	0	1	1	6	0.75
OO83	0	1	2	1	4	0	1	1	10	1.25
OO86	1	0	0	1	0	0	0	0	2	0.25
Total	2	4	2	3	6	0	2	2	21	2.63

Job Series	HRO PERSONNEL ATTRITES								Attrite Totals	Average Attrites
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O201	0	0	2	0	0	0	0	0	2	0.25
O203	0	2	1	0	1	0	0	0	4	0.5
O230	0	0	0	2	0	0	0	1	3	0.38
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	1	0	1	0.13
O361	0	0	0	0	0	0	0	0	0	0
Total	0	2	3	2	1	0	1	1	10	1.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O201	0	0	0	0	1	0	0	0	1	0.13
O203	0	1	1	0	1	0	0	0	3	0.38
O230	0	0	0	0	0	0	0	0	0	0
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	0	0	0	0
O361	0	0	0	1	0	0	0	0	1	0.13
Total	0	1	1	1	2	0	0	0	5	0.63
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O201	1	1	0	0	0	0	1	0	3	0.38
O203	0	1	1	1	0	1	3	1	8	1
O230	0	0	0	0	1	0	0	0	1	0.13
O235	0	0	0	0	0	0	0	0	0	0
O260	1	0	0	0	0	0	0	0	1	0.13
O361	0	0	0	0	0	0	0	0	0	0
Total	2	2	1	1	1	1	4	1	13	1.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O201	0	0	1	0	0	0	0	0	1	0.13
O203	1	1	0	3	0	0	0	1	6	0.75
O230	0	0	0	0	1	0	0	0	1	0.13
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	0	0	0	0
O361	0	0	0	0	0	0	0	0	0	0
Total	1	1	1	3	1	0	0	1	8	1

Job Series	ADMINISTRATIVE ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O341	0	0	0	0	0	0	0	1	1	0.13
O342	0	1	0	0	0	0	0	0	1	0.13
O343	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	1	2	0.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O341	0	0	0	0	0	0	1	1	2	0.25
O342	1	1	0	0	0	0	0	0	2	0.25
O343	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	0	0	0	1	1	4	0.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O341	0	0	0	0	0	0	0	0	0	0
O342	0	0	0	0	0	1	0	0	1	0.13
O343	0	0	0	1	0	0	0	1	2	0.25
Total	0	0	0	1	0	1	0	1	3	0.38
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O341	0	0	0	0	0	0	0	0	0	0
O342	0	0	0	0	0	1	0	0	1	0.13
O343	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	1	0.13

Job Series	COMPUTER OPERATORS/SPECIALISTS ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
O332	0	0	0	0	0	0	0	0	0	0
O334	0	3	1	1	1	1	0	2	9	1.13
O335	0	0	0	0	0	1	1	0	2	0.25
Total	0	3	1	1	1	2	1	2	11	1.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
O332	1	0	0	0	0	0	0	0	1	0.13
O334	0	0	4	0	1	3	0	0	8	1
O335	0	1	0	1	0	1	0	0	3	0.38
Total	1	4	5	2	2	6	1	2	23	2.88
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
O332	0	0	0	1	0	0	0	1	2	0.25
O334	1	2	2	11	4	1	1	3	25	3.13
O335	0	0	0	1	1	2	0	0	4	0.5
Total	1	2	2	13	5	3	1	4	31	3.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
O332	1	2	1	0	0	1	0	0	5	0.63
O334	1	4	4	1	4	2	1	3	20	2.5
O335	0	3	1	4	7	1	0	4	20	2.5
Total	2	9	6	5	11	4	1	7	45	5.63

Job Series	FINANCIAL ATTRITES								Attrite Totals	Average Attrites
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	1	0	1	2	1	2	3	0	10	1.25
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	2	3	0	10	1.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O501	0	0	0	0	0	0	1	1	2	0.25
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	0	2	3	0	0	1	0	0	6	0.75
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	0	0	0	1	1	0.13
Total	0	2	3	0	0	1	1	2	9	1.13
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	0	0	2	1	1	3	1	3	11	1.38
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	1	1	0	0	0	2	0.25
O561	0	0	0	0	1	0	0	1	2	0.25
Total	0	0	2	2	3	3	1	4	15	1.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O501	1	0	0	0	0	0	0	0	1	0.13
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	1	1	0.13
O525	1	2	1	0	2	0	0	1	7	0.88
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	1	1	0	0	2	0.25
O561	0	0	0	0	0	2	0	1	3	0.38
Total	2	2	1	0	3	3	0	3	14	1.75

Job Series	ENGINEERS/TECHNICIANS ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O801	0	0	0	0	0	0	0	0	0	0
O802	0	0	1	1	0	1	0	2	5	0.63
O806	0	0	0	1	0	0	0	0	1	0.13
O809	0	0	0	0	0	0	0	0	0	0
O810	0	0	0	0	0	0	0	1	1	0.13
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	0	0	0	0	0	0
O854	0	0	0	0	0	0	1	0	1	0.13
O855	0	1	0	0	0	0	1	0	2	0.25
O856	0	2	1	0	0	0	2	0	5	0.63
O861	0	0	0	0	0	0	1	0	1	0.13
O896	0	0	0	0	0	0	0	0	0	0
Total	0	3	2	2	0	1	5	3	16	2
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O801	0	0	0	0	0	1	0	0	1	0.13
O802	1	0	2	2	1	0	1	0	7	0.88
O806	0	0	0	0	0	0	0	1	1	0.13
O809	0	0	0	0	1	0	0	0	1	0.13
O810	1	0	0	0	0	0	0	0	1	0.13
O819	0	1	0	0	0	0	0	0	1	0.13
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	0	0	0	0	0	0
O854	0	0	0	0	0	0	0	1	1	0.13
O855	0	0	0	0	0	0	0	0	0	0
O856	0	0	0	0	0	0	0	1	1	0.13
O861	0	0	0	0	0	0	0	0	0	0
O896	0	0	0	0	0	0	0	0	0	0
Total	2	1	2	2	2	1	1	3	14	1.75

Job Series	ENGINEERS/TECHNICIANS ATTRITES								Attrite Totals	Average Attrites
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
O801	0	0	0	1	0	1	0	0	2	0.25
O802	0	0	0	0	0	0	1	1	2	0.25
O806	0	0	0	0	0	0	1	0	1	0.13
O809	0	0	0	0	0	0	0	0	0	0
O810	0	0	0	0	0	1	0	0	1	0.13
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	0	0	0	0	0	0
O854	0	0	0	0	0	0	0	1	1	0.13
O855	0	0	0	1	0	1	0	0	2	0.25
O856	1	0	0	1	0	0	0	0	2	0.25
O861	0	0	0	1	0	0	0	0	1	0.13
O896	0	0	0	0	0	1	0	0	1	0.13
Total	1	0	0	4	0	4	2	2	13	1.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
O801	0	0	0	1	0	0	1	0	2	0.25
O802	0	2	2	0	1	0	1	0	6	0.75
O806	0	0	0	0	0	0	0	0	0	0
O809	0	0	0	0	0	0	0	0	0	0
O810	0	0	0	0	0	0	0	0	0	0
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	1	0	0	0	1	0.13
O854	0	0	0	0	0	0	0	0	0	0
O855	0	0	3	0	0	1	0	0	4	0.5
O856	1	1	0	0	1	1	0	0	4	0.5
O861	0	0	0	0	0	0	0	1	1	0.13
O896	0	0	0	1	0	0	0	0	1	0.13
Total	1	3	5	2	3	2	2	1	19	2.38

Job Series	PROCUREMENT/SUPPLY ATTRITES								Attrite Totals	Average Attrites
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
1101	0	0	0	0	0	0	0	0	0	0
1102	0	0	0	0	1	0	0	3	4	0.5
1105	3	0	1	3	0	0	1	1	9	1.13
1106	0	0	0	0	0	1	0	1	2	0.25
2005	0	1	1	3	1	0	0	1	7	0.88
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	2	0	2	0.25
2131	0	0	0	0	0	0	0	0	0	0
2132	0	0	0	1	0	0	0	0	1	0.13
2134	0	1	0	0	0	0	0	0	1	0.13
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	3	2	2	7	2	1	3	6	26	3.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1101	0	0	0	0	0	0	0	1	1	0.13
1102	0	0	0	0	1	0	1	0	2	0.25
1105	0	1	0	0	0	0	0	0	1	0.13
1106	0	1	2	0	0	0	0	0	3	0.38
2005	2	3	0	1	1	1	0	1	9	1.13
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	1	0	0	1	0.13
2131	0	0	0	0	0	0	0	0	0	0
2132	0	0	0	0	0	1	0	0	1	0.13
2134	0	1	0	0	0	0	0	0	1	0.13
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	2	6	2	1	2	3	1	2	19	2.38

Job Series	PROCUREMENT/SUPPLY ATTRITES									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1101	0	0	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	1	1	0.13
1105	0	1	0	0	1	0	0	1	3	0.38
1106	0	0	0	0	1	1	0	1	3	0.38
2005	0	0	1	1	1	0	0	0	3	0.38
2010	0	0	0	0	0	1	0	0	1	0.13
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	1	1	2	0.25
2131	0	0	0	0	0	0	0	0	0	0
2132	0	0	1	0	0	0	0	0	1	0.13
2134	0	0	0	0	0	0	0	0	0	0
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	0	1	2	1	3	2	1	4	14	1.75
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1101	0	0	0	0	0	0	0	0	0	0
1102	1	0	0	0	0	2	0	4	7	0.88
1105	1	0	0	0	0	1	0	0	2	0.25
1106	0	0	0	1	1	0	0	1	3	0.38
2005	0	2	1	0	2	0	1	0	6	0.75
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	2	0	1	3	0.38
2131	0	0	0	0	0	0	0	0	0	0
2132	0	0	1	1	0	0	0	0	2	0.25
2134	0	0	0	0	0	0	0	0	0	0
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	2	2	2	2	3	5	1	6	23	2.88

Job Series	PUBLIC WORKS/STAFF ATTRITES								Attrite Totals	Average Attrites
	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
Quarter 1										
1152	0	0	1	1	0	0	0	1	3	0.38
1173	0	0	0	1	0	0	0	0	1	0.13
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	2	0	0	0	1	4	0.5
Quarter 2										
1152	0	0	0	0	0	0	0	0	0	0
1173	0	0	0	0	0	0	0	0	0	0
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Quarter 3										
1152	0	1	1	1	0	0	0	0	3	0.38
1173	0	0	0	1	0	0	0	0	1	0.13
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	4	0.5
Quarter 4										
1152	0	1	1	0	0	0	0	0	2	0.25
1173	0	0	0	1	0	0	0	0	1	0.13
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	0	0	0	0	3	0.38

Job Series	SCIENCE/TECHNICAL ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1301	0	0	0	0	1	0	1	0	2	0.25
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1311	1	0	0	1	0	0	0	0	2	0.25
1321	0	1	0	0	0	0	0	0	1	0.13
1340	1	0	0	0	0	0	1	0	2	0.25
1341	0	0	0	1	0	0	0	0	1	0.13
1360	0	0	0	0	0	0	0	2	2	0.25
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	0	1	0	0	0	0	1	0.13
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	2	1	0	3	1	0	2	2	11	1.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1301	0	0	1	0	0	0	0	0	1	0.13
1306	0	0	0	1	0	0	0	0	1	0.13
1310	0	0	0	0	0	0	0	0	0	0
1311	0	0	0	1	0	0	1	0	2	0.25
1321	0	0	0	0	0	0	0	0	0	0
1340	0	0	0	0	0	0	0	0	0	0
1341	0	0	0	0	0	0	0	0	0	0
1360	1	0	0	1	0	0	0	0	2	0.25
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	2	0	0	0	0	1	3	0.38
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	1	0	3	3	0	0	1	1	9	1.13

Job Series	SCIENCE/TECHNICAL ATTRITES								Attrite Totals	Average Attrites
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
1301	0	2	0	1	0	0	0	0	3	0.38
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1311	0	2	0	0	1	0	0	0	3	0.38
1321	0	0	0	0	0	0	0	0	0	0
1340	2	0	1	0	0	1	0	0	4	0.5
1341	0	0	0	1	0	0	0	0	1	0.13
1360	0	1	0	0	1	0	1	1	4	0.5
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	2	5	1	2	2	1	1	1	15	1.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1301	1	0	0	0	0	1	0	0	2	0.25
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1311	0	2	1	1	3	0	1	0	8	1
1321	0	0	0	0	0	0	0	0	0	0
1340	0	0	0	1	0	0	0	0	1	0.13
1341	0	0	2	0	0	0	0	0	2	0.25
1360	0	0	0	1	0	1	0	1	3	0.38
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	1	2	3	3	3	2	1	1	16	2

Job Series	LIBRARY ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1410	0	1	0	1	0	1	0	0	3	0.38
1411	1	0	0	2	2	1	0	0	6	0.75
Total	1	1	0	3	2	2	0	0	9	1.13
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1410	0	1	1	0	0	1	0	0	3	0.38
1411	1	2	1	1	1	0	1	2	9	1.13
Total	1	3	2	1	1	1	1	2	12	1.5
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1410	0	0	0	0	0	2	0	1	3	0.38
1411	2	1	0	1	0	0	0	1	5	0.63
Total	2	1	0	1	0	2	0	2	8	1
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	Average Attrites
1410	1	0	1	0	0	1	2	1	6	0.75
1411	0	1	0	2	2	1	0	2	8	1
Total	1	1	1	2	2	2	2	3	14	1.75

Job Series	EDUCATION/TRAINING ATTRITES								Attrite Totals	Average Attrites
	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
Quarter 1										
1701	0	0	0	1	0	0	1	0	2	0.25
1702	1	2	1	0	1	3	0	0	8	1
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	1	2	1	1	1	3	1	0	10	1.25
Quarter 2										
1701	0	0	0	2	0	0	0	0	2	0.25
1702	1	0	1	0	0	1	0	0	3	0.38
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	2	0	1	0	0	5	0.63
Quarter 3										
1701	0	0	0	1	0	0	0	2	3	0.38
1702	1	0	0	0	3	0	2	0	6	0.75
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	3	0	2	2	9	1.13
Quarter 4										
1701	0	0	0	2	0	0	0	0	2	0.25
1702	0	1	0	0	2	1	1	0	5	0.63
1712	0	0	0	0	0	1	0	0	1	0.13
1750	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	2	2	2	1	0	8	1

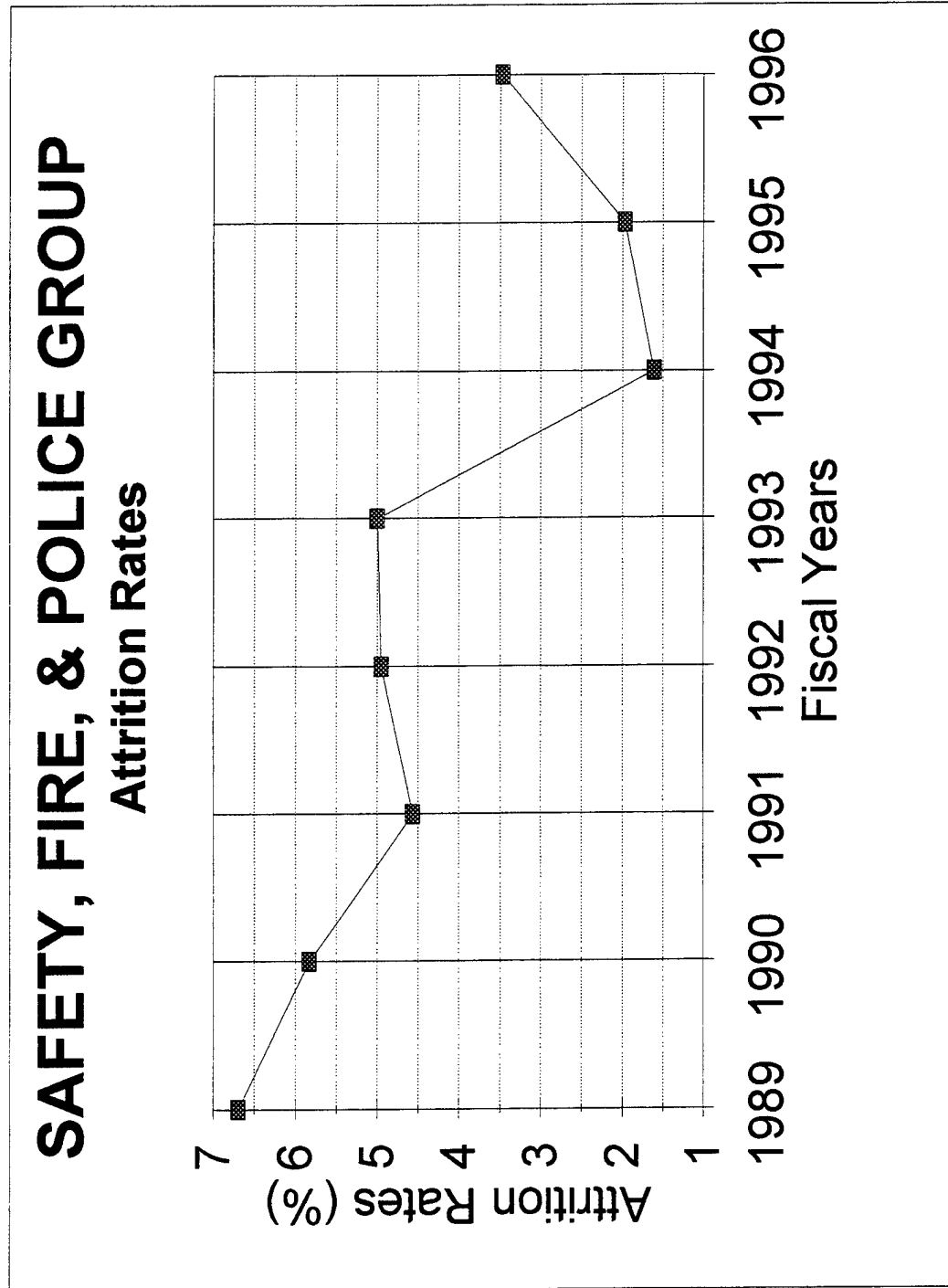
Job Series	WAGE GRADE/SUPERVISORS ATTRITES									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
2502	0	1	0	0	0	0	1	0	2	0.25
2604	0	2	0	0	0	0	0	0	2	0.25
2608	0	0	0	0	0	0	0	0	0	0
2805	0	0	0	0	0	0	0	0	0	0
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	1	0	0	1	0.13
3502	0	0	2	0	0	0	0	0	2	0.25
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	1	0	0	0	0	0	0	0	1	0.13
4204	0	0	0	0	0	0	1	0	1	0.13
4206	1	0	0	0	0	0	0	0	1	0.13
4402	0	0	0	0	0	0	0	0	0	0
4417	0	0	0	0	0	0	0	0	0	0
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	0	0	1	0	0	0	1	0	2	0.25
4701	0	0	0	0	0	0	3	1	4	0.5
4714	0	0	0	0	0	0	0	0	0	0
4749	1	2	0	0	0	0	2	1	6	0.75
4801	0	0	0	0	0	1	2	1	4	0.5
4804	0	0	1	0	0	1	0	0	2	0.25
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	0	0	1	0	1	0.13
5026	0	0	0	0	0	0	0	0	0	0
5306	1	0	0	0	0	0	0	0	1	0.13
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	1	0	1	0	0	0	1	0	3	0.38
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	0	0	0	0	0	0	0
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	0	0	0	0	0
6907	0	0	0	2	0	0	1	0	3	0.38
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	5	5	5	2	0	3	13	3	36	4.5

Job Series	WAGE GRADE/SUPERVISORS ATTRITES								AttriteTotals	Average Attrites
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
2502	1	0	0	1	0	0	0	0	2	0.25
2604	0	0	1	0	0	0	0	0	1	0.13
2608	0	0	0	0	0	0	0	0	0	0
2805	0	0	0	0	0	0	0	2	2	0.25
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	0	0	0	0	0
3502	1	1	1	1	0	1	0	0	5	0.63
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0	0	0
4204	0	0	0	1	0	0	0	0	1	0.13
4206	0	0	0	0	0	0	0	0	0	0
4402	0	0	0	0	0	0	0	0	0	0
4417	0	0	0	0	1	0	0	0	1	0.13
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	0	0	1	1	0	0	0	1	3	0.38
4701	0	2	1	0	0	2	0	2	7	0.88
4714	0	0	0	0	0	0	0	0	0	0
4749	0	0	2	0	1	0	0	1	4	0.5
4801	0	0	0	0	0	0	0	0	0	0
4804	0	0	0	0	0	0	0	1	1	0.13
5001	0	0	0	0	0	0	0	0	0	0
5003	1	0	0	0	1	0	0	0	2	0.25
5026	0	0	0	0	0	0	0	0	0	0
5306	0	0	0	0	0	1	0	1	2	0.25
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	0	0	0	0	0	0	0	1	1	0.13
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	1	0	0	0	0	1	0.13
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	0	0	0	0	0
6907	0	0	0	0	0	0	0	0	0	0
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	3	3	6	5	3	4	0	9	33	4.13

Job Series	WAGE GRADE/SUPERVISORS ATTRITES									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	AttriteTotals	Average Attrites
2502	0	0	0	0	0	0	0	0	0	0
2604	0	0	0	0	0	0	0	0	0	0
2608	0	0	0	0	0	0	0	0	0	0
2805	0	0	0	1	0	1	0	0	2	0.25
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	0	0	0	0	0
3502	1	1	1	0	2	0	0	1	6	0.75
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0	0	0
4204	0	0	0	0	0	1	0	0	1	0.13
4206	1	0	0	0	0	0	0	0	1	0.13
4402	0	0	0	1	0	0	0	0	1	0.13
4417	0	0	0	2	0	0	0	0	2	0.25
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	2	1	0	0	0	0	2	0	5	0.63
4701	0	0	1	1	0	0	0	0	2	0.25
4714	0	0	0	0	0	0	0	0	0	0
4749	0	0	1	0	1	1	0	2	5	0.63
4801	0	0	0	0	0	0	0	0	0	0
4804	0	0	0	0	0	0	0	0	0	0
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	0	0	0	0	0	0
5026	0	0	0	0	0	0	0	0	0	0
5306	0	1	0	0	0	0	0	0	1	0.13
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	2	0	0	0	0	0	0	1	3	0.38
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	0	0	0	0	0	0	0
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	0	0	0	0	0
6904	0	0	0	0	0	0	0	0	0	0
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	6	3	3	5	3	3	2	4	29	3.63

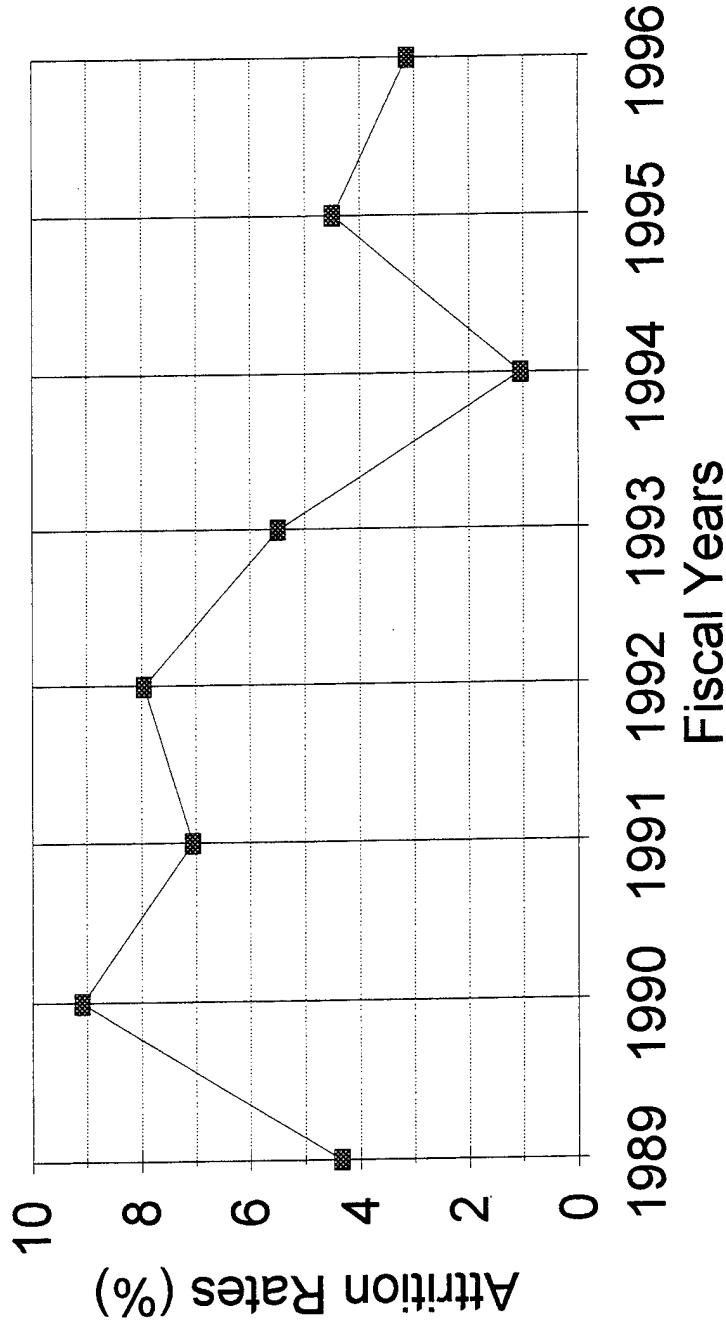
Job Series	WAGE GRADE/SUPERVISORS ATTRITES									Average Attrites
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Attrite Totals	
2502	0	0	0	0	2	0	0	0	2	0.25
2604	0	0	0	0	0	0	0	0	0	0
2608	0	0	0	0	0	0	0	0	0	0
2805	1	0	2	0	0	0	1	0	4	0.5
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	1	0	0	0	1	0.13
3502	0	1	0	0	3	2	0	0	6	0.75
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0	0	0
4204	0	0	0	0	0	0	0	0	0	0
4206	0	0	0	0	0	0	0	0	0	0
4402	0	1	0	0	0	0	0	0	1	0.13
4417	0	0	0	0	0	0	0	0	0	0
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	0	0	0	0	0	0	1	0	1	0.13
4701	0	0	0	0	0	0	0	2	2	0.25
4714	0	0	0	0	0	0	0	0	0	0
4749	0	1	0	0	0	0	0	1	2	0.25
4801	0	0	0	0	0	0	0	0	0	0
4804	0	0	0	0	1	0	0	0	1	0.13
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	0	0	0	0	0	0
5026	0	0	0	0	0	0	0	0	0	0
5306	0	0	0	0	0	0	0	0	0	0
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	0	0	0	1	0	0	0	0	1	0.13
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	1	0	0	0	0	1	0.13
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	1	0	0	1	0.13
6907	0	0	0	0	0	0	0	0	0	0
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	1	3	2	2	7	3	2	3	23	2.88

APPENDIX D. YEARLY ATTRITION RATES



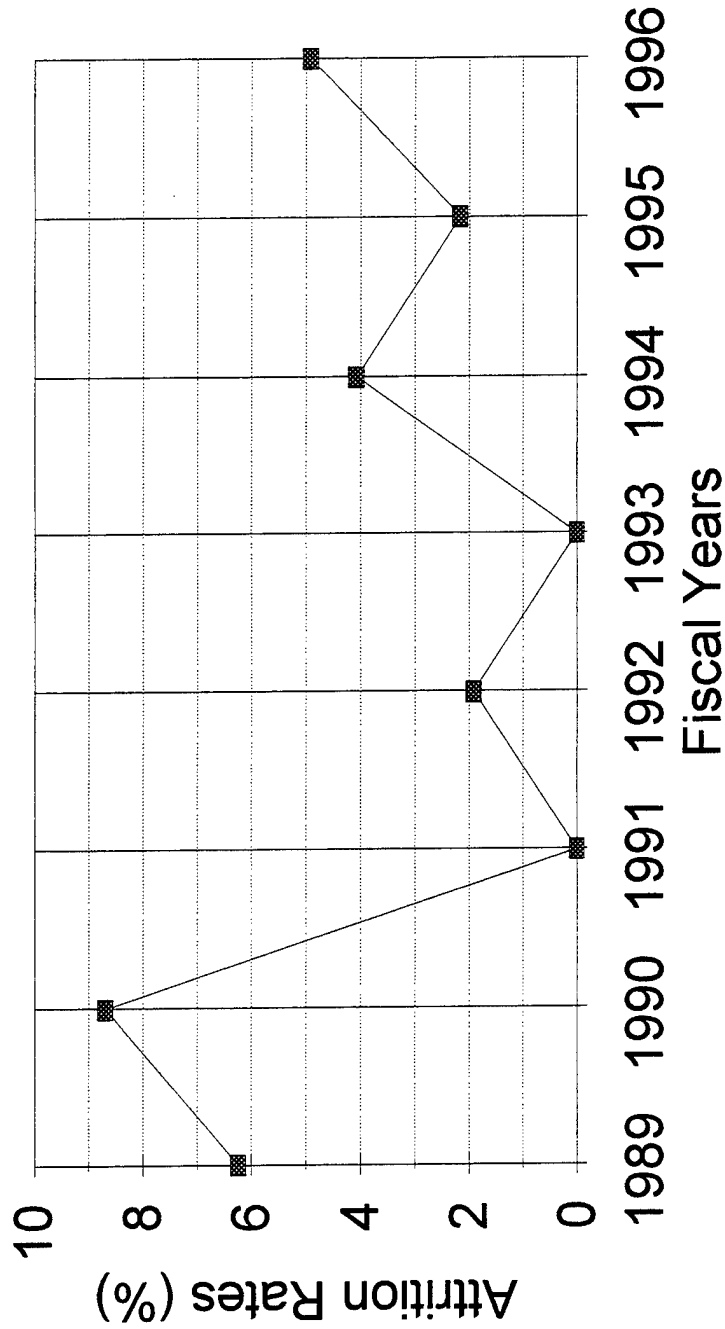
HRO PERSONNEL GROUP

Attrition Rates



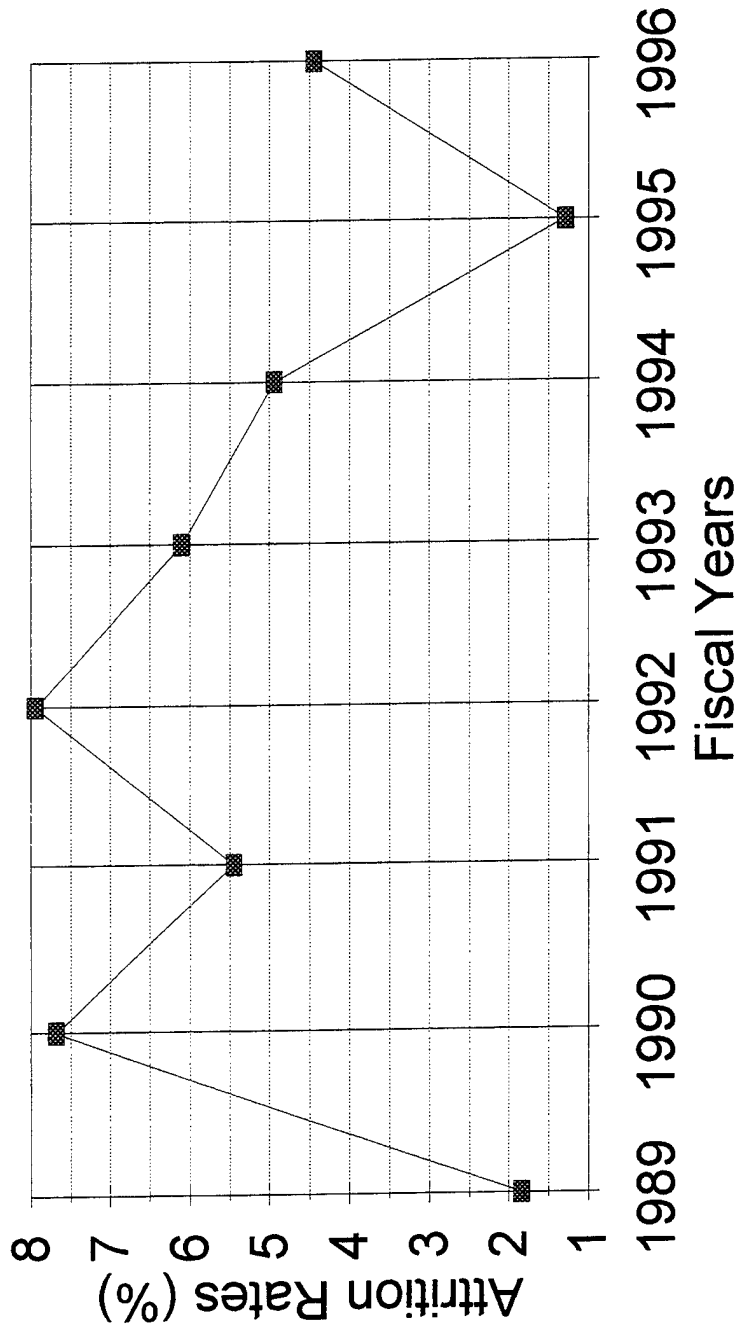
ADMINISTRATIVE GROUP

Attrition Rates



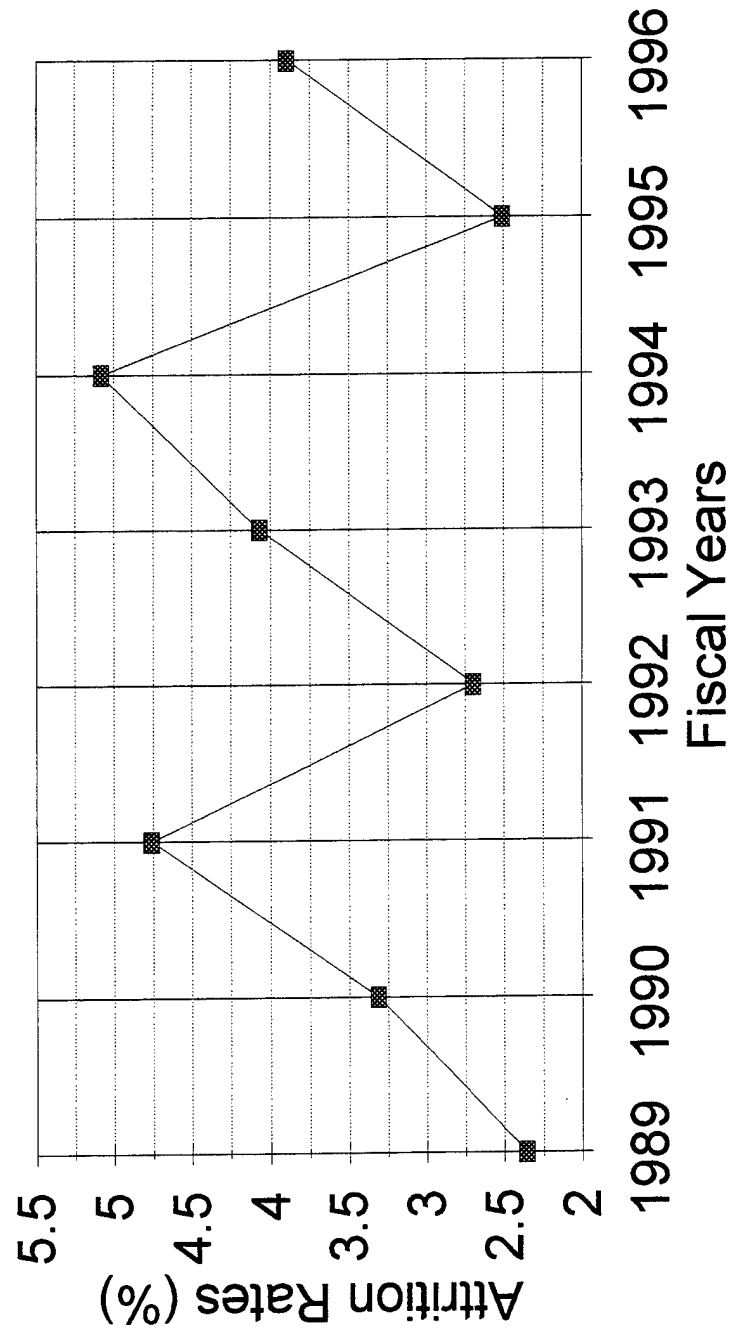
COMPUTER OPERATORS/SPECIALISTS GROUP

Attrition Rates



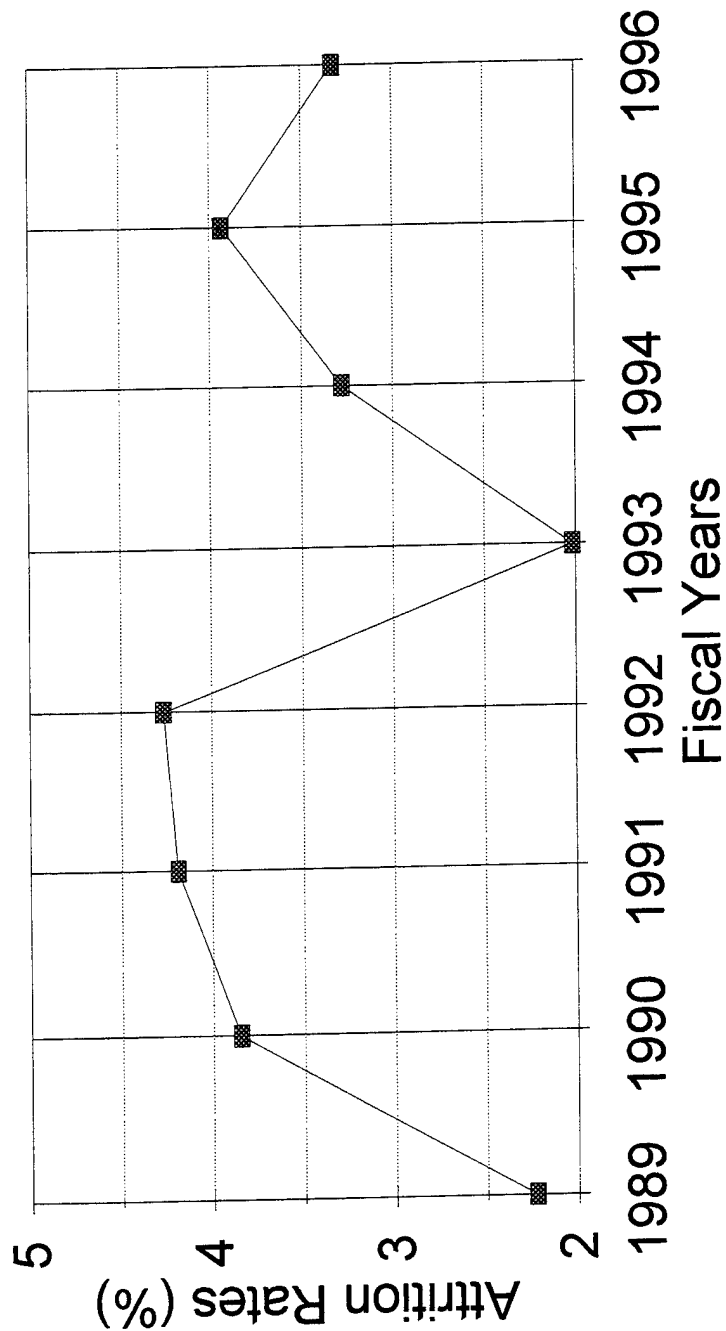
FINANCIAL GROUP

Attrition Rates



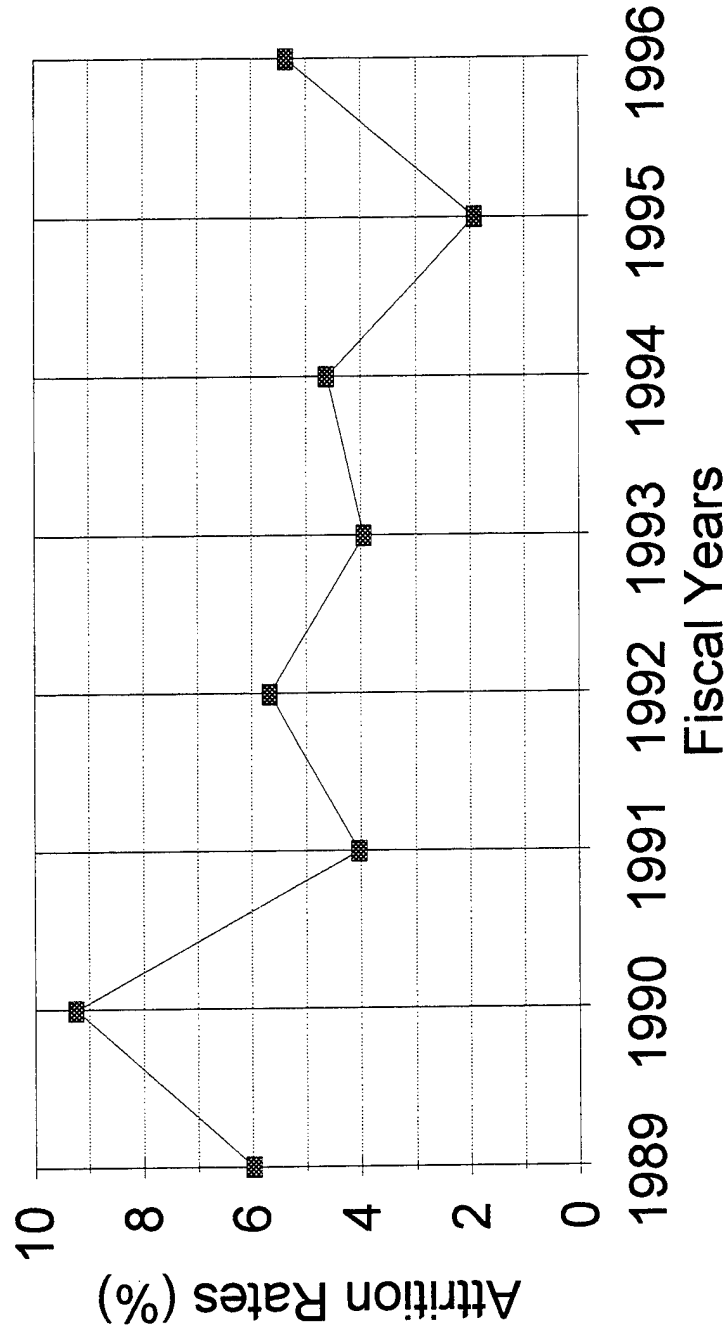
ENGINEERS/TECHNICIANS GROUP

Attrition Rates



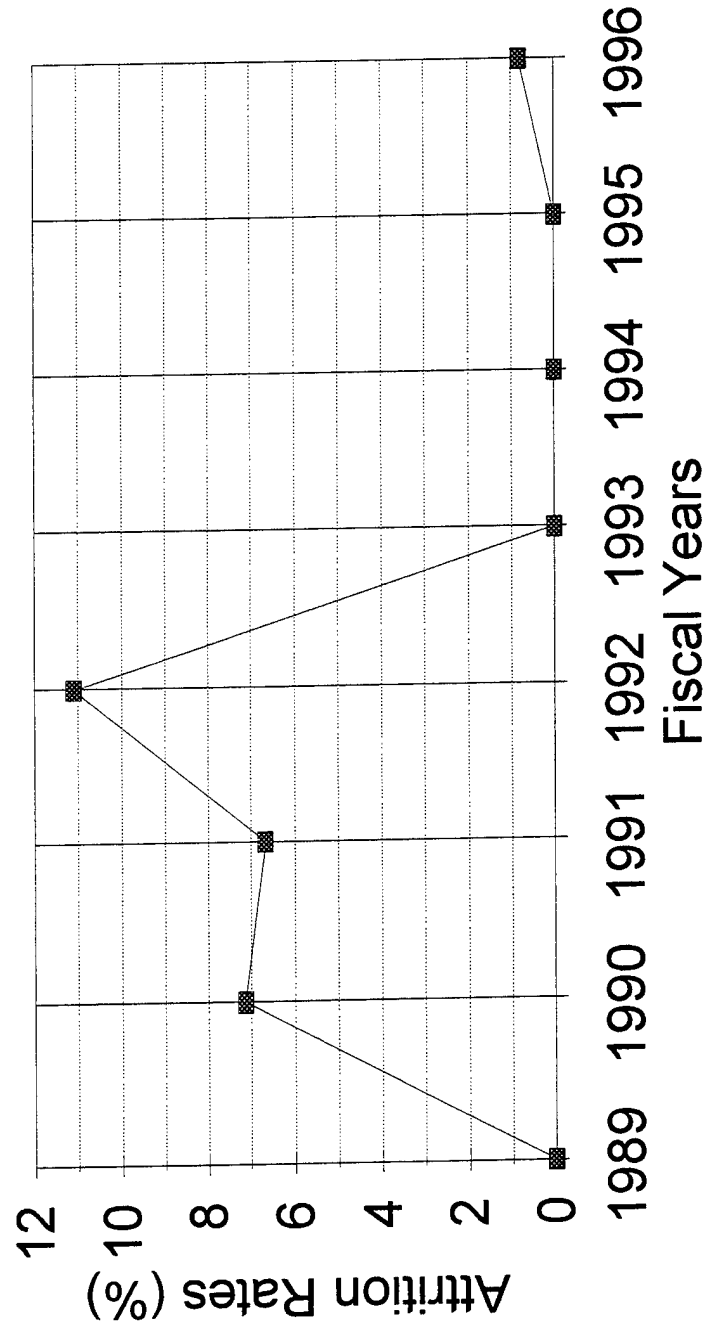
PROCUREMENT/SUPPLY GROUP

Attrition Rates



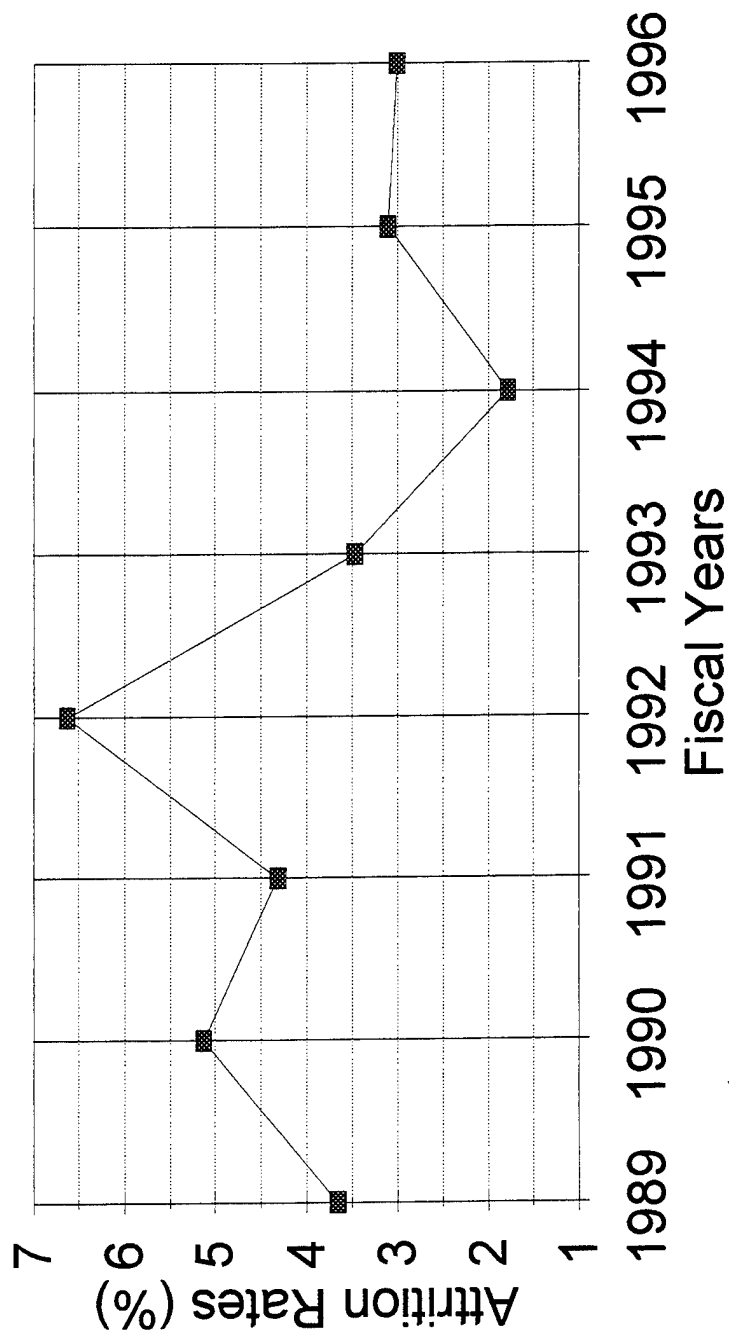
PUBLIC WORKS/STAFF GROUP

Attrition Rates



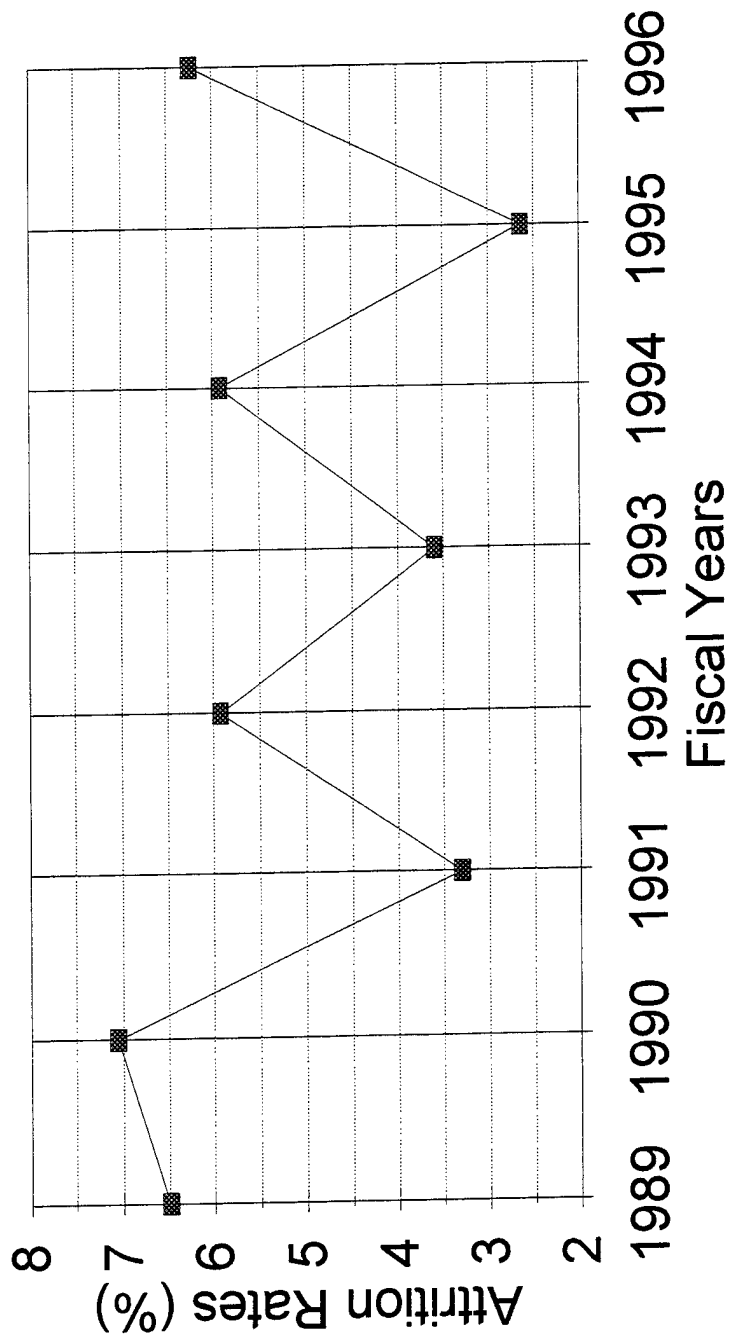
SCIENCE/TECHNICAL GROUP

Attrition Rates



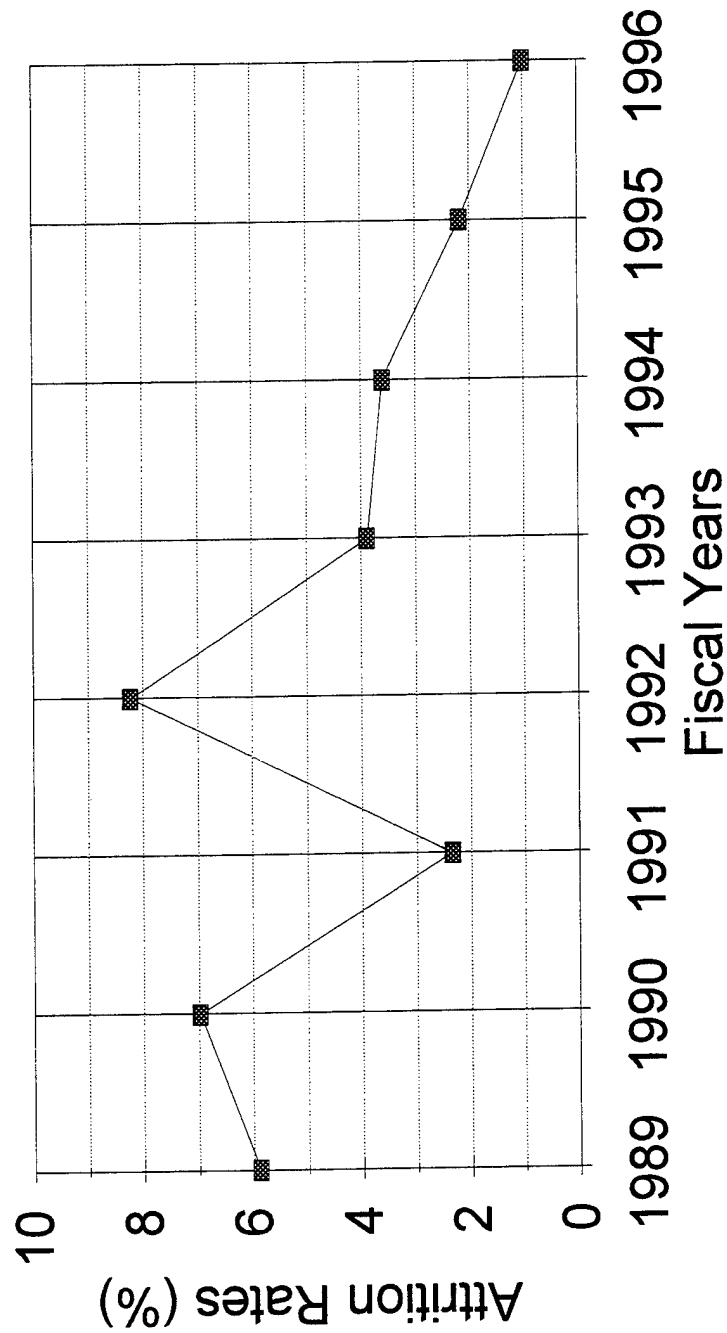
LIBRARY GROUP

Attrition Rates



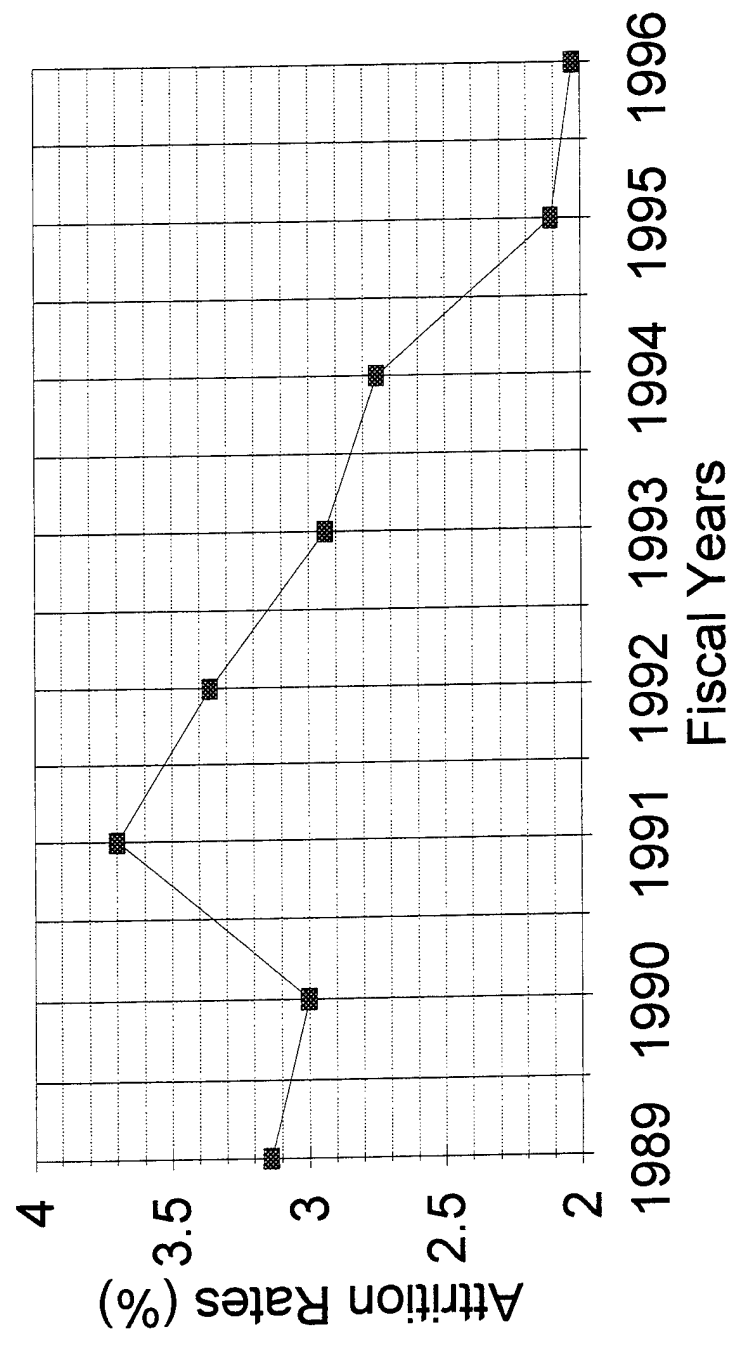
EDUCATION/TRAINING GROUP

Attrition Rates



WAGE GRADE/SUPERVISORS GROUP

Attrition Rates



APPENDIX E. ACCESSIONS

Job Series	SAFETY, FIRE, AND POLICE ACCESSIONS								Accessions Totals	Avg Accessions
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996		
OO18	1	1	0	0	1	0	0	0	3	0.38
OO28	0	0	1	0	0	0	0	0	1	0.13
OO80	0	0	0	0	1	0	0	1	2	0.25
OO81	0	0	4	0	1	0	1	4	10	1.25
OO83	1	1	1	0	0	4	1	3	11	1.38
OO86	0	0	1	0	0	0	0	0	1	0.13
Total	2	2	7	0	3	4	2	8	28	3.5
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
OO18	0	0	0	0	0	1	0	0	1	0.13
OO28	0	0	0	0	0	0	0	1	1	0.13
OO80	0	0	0	0	0	0	0	0	0	0
OO81	2	1	4	1	0	0	1	0	9	1.13
OO83	1	0	0	2	1	0	1	0	5	0.63
OO86	0	0	1	0	0	0	0	0	1	0.13
Total	3	1	5	3	1	1	2	1	17	2.13
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
OO18	0	0	0	0	0	0	0	0	0	0
OO28	0	0	0	0	0	0	0	1	1	0.13
OO80	0	0	0	1	1	0	0	5	7	0.88
OO81	1	0	2	1	0	2	1	1	8	1
OO83	1	2	0	1	0	1	0	4	9	1.13
OO86	1	0	0	1	0	0	0	0	2	0.25
Total	3	2	2	4	1	3	1	11	27	3.38
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
OO18	2	0	0	0	1	0	1	0	4	0.5
OO28	0	0	0	0	0	0	0	0	0	0
OO80	0	0	0	0	0	0	0	0	0	0
OO81	2	3	0	1	0	0	4	0	10	1.25
OO83	3	1	0	2	1	0	1	0	8	1
OO86	0	2	1	0	0	0	0	0	3	0.38
Total	7	6	1	3	2	0	6	0	25	3.13

Job Series	HRO PERSONNEL ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O201	0	2	0	0	0	0	1	0	3	0.38
O203	0	1	1	1	2	0	1	0	6	0.75
O230	0	0	0	1	1	0	0	1	3	0.38
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	1	0	1	2	0.25
O361	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	2	3	1	2	2	14	1.75
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O201	0	0	1	0	1	0	0	0	2	0.25
O203	0	2	2	0	0	2	0	0	6	0.75
O230	0	0	0	0	0	0	0	0	0	0
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	0	0	0	0
O361	0	0	0	0	0	0	0	0	0	0
Total	0	2	3	0	1	2	0	0	8	1
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O201	1	0	0	0	0	1	0	0	2	0.25
O203	0	2	0	1	2	0	1	0	6	0.75
O230	0	0	0	0	1	0	0	0	1	0.13
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	0	0	0	0
O361	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	1	3	1	1	0	9	1.13
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O201	0	1	0	0	0	0	0	0	1	0.13
O203	0	3	2	2	0	2	0	0	9	1.13
O230	0	0	0	0	0	0	0	0	0	0
O235	0	0	0	0	0	0	0	0	0	0
O260	0	0	0	0	0	0	0	0	0	0
O361	0	0	0	0	0	0	0	0	0	0
Total	0	4	2	2	0	2	0	0	10	1.25

Job Series	ADMINISTRATIVE ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O341	0	0	0	2	0	0	0	0	2	0.25
O342	0	1	0	0	0	0	0	0	1	0.13
O343	0	0	0	0	0	0	1	1	2	0.25
Total	0	1	0	2	0	0	1	1	5	0.63
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O341	0	0	0	0	0	0	0	0	0	0
O342	1	0	0	1	0	0	0	0	2	0.25
O343	0	0	0	0	0	0	0	3	3	0.38
Total	1	0	0	1	0	0	0	3	5	0.63
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O341	0	0	0	0	0	0	1	0	1	0.13
O342	0	0	0	0	0	0	0	0	0	0
O343	0	0	0	1	0	0	0	0	1	0.13
Total	0	0	0	1	0	0	1	0	2	0.25
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O341	0	0	0	0	0	0	0	1	1	0.13
O342	1	0	1	0	0	0	0	1	3	0.38
O343	0	0	0	0	0	0	1	0	1	0.13
Total	1	0	1	0	0	0	1	2	5	0.63

COMPUTER OPERATORS/SPECIALISTS ACCESSIONS										
Job Series										
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O332	0	1	1	0	0	0	0	3	5	0.63
O334	1	1	9	3	3	1	3	2	23	2.88
O335	1	0	0	1	0	1	0	1	4	0.5
Total	2	2	10	4	3	2	3	6	32	4
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O332	1	1	1	0	0	0	0	0	3	0.38
O334	5	1	3	1	2	1	2	4	19	2.38
O335	3	0	0	0	0	0	0	1	4	0.5
Total	9	2	4	1	2	1	2	5	26	3.25
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O332	0	0	0	1	0	0	0	1	2	0.25
O334	3	0	1	2	2	3	5	2	18	2.25
O335	1	2	2	4	4	3	5	4	25	3.13
Total	4	2	3	7	6	6	10	7	45	5.63
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O332	0	0	0	0	0	0	0	1	1	0.13
O334	0	1	2	1	2	3	4	3	16	2
O335	0	1	0	1	3	0	3	1	9	1.13
Total	0	2	2	2	5	3	7	5	26	3.25

Job Series	FINANCIAL ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O501	0	0	0	0	0	0	0	1	1	0.13
O503	0	1	0	0	0	0	0	0	1	0.13
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	1	0	1	3	1	2	0	2	10	1.25
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	1	1	0	0	0	0	2	0	4	0.5
Total	2	2	1	3	1	2	2	3	16	2
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	2	1	4	2	1	2	1	0	13	1.63
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	0	0	0	0	0	0	0	0
O561	0	0	0	0	0	0	0	0	0	0
Total	2	1	4	2	1	2	1	0	13	1.63
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O501	0	0	0	0	0	0	0	0	0	0
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	0	0	0	0
O510	0	0	0	0	0	0	0	0	0	0
O525	1	0	0	1	0	2	0	0	4	0.5
O544	0	0	0	0	0	0	0	0	0	0
O560	0	0	1	0	0	0	0	0	1	0.13
O561	0	0	0	0	0	1	0	2	3	0.38
Total	1	0	1	1	0	3	0	2	8	1
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O501	0	0	1	0	0	0	0	0	1	0.13
O503	0	0	0	0	0	0	0	0	0	0
O505	0	0	0	0	0	0	1	0	1	0.13
O510	0	0	0	0	0	0	0	0	0	0
O525	3	5	2	3	3	3	3	3	25	3.13
O544	0	0	0	0	0	0	1	0	1	0.13
O560	0	0	0	0	1	0	0	0	1	0.13
O561	0	0	0	0	0	0	2	0	2	0.25
Total	3	5	3	3	4	3	7	3	31	3.88

Job Series	ENGINEERS/TECHNICIANS ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O801	1	0	0	0	0	0	0	0	1	0.13
O802	0	0	1	0	0	0	0	2	3	0.38
O806	0	0	0	1	0	0	0	0	1	0.13
O809	0	0	0	0	0	0	0	0	0	0
O810	0	0	0	0	0	0	2	1	3	0.38
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	1	0	1	0.13
O850	1	0	0	0	0	1	1	0	3	0.38
O854	0	0	0	0	0	0	0	0	0	0
O855	1	0	0	0	1	0	0	0	2	0.25
O856	0	0	2	2	0	0	1	1	6	0.75
O861	0	0	0	0	1	0	0	0	1	0.13
O896	0	0	0	0	0	0	0	0	0	0
Total	3	0	3	3	2	1	5	4	21	2.63
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O801	1	0	0	0	0	0	0	2	3	0.38
O802	0	0	1	1	0	0	0	1	3	0.38
O806	0	0	0	0	0	0	0	0	0	0
O809	0	1	0	0	0	0	0	0	1	0.13
O810	0	0	0	0	0	1	0	0	1	0.13
O819	0	0	0	0	0	0	0	0	0	0
O830	1	0	1	0	0	0	0	0	2	0.25
O850	0	0	0	0	0	0	0	0	0	0
O854	0	0	0	0	0	0	0	0	0	0
O855	1	0	1	0	0	1	1	0	4	0.5
O856	1	1	0	0	0	0	0	0	2	0.25
O861	0	0	0	0	0	0	0	0	0	0
O896	0	0	0	0	0	0	0	5	5	0.63
Total	4	2	3	1	0	2	1	8	21	2.63

Job Series	ENGINEERS/TECHNICIANS ACCESSIONS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O801	0	0	0	0	0	1	0	0	1	0.13
O802	0	2	3	1	1	0	1	1	9	1.13
O806	0	1	0	0	0	0	0	1	2	0.25
O809	0	0	0	1	0	0	0	0	1	0.13
O810	1	0	0	0	0	0	0	0	1	0.13
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	0	0	0	1	1	0.13
O854	0	0	0	0	0	0	1	0	1	0.13
O855	0	0	0	0	0	0	0	0	0	0
O856	0	0	0	0	2	1	2	1	6	0.75
O861	0	0	0	0	1	0	1	0	2	0.25
O896	0	0	0	0	0	0	0	0	0	0
Total	1	3	3	2	4	2	5	4	24	3
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
O801	0	0	1	2	0	1	1	0	5	0.63
O802	0	1	0	0	1	0	0	0	2	0.25
O806	0	0	0	0	0	0	0	0	0	0
O809	0	0	0	0	0	0	0	0	0	0
O810	0	0	0	0	0	0	0	0	0	0
O819	0	0	0	0	0	0	0	0	0	0
O830	0	0	0	0	0	0	0	0	0	0
O850	0	0	0	0	0	0	0	0	0	0
O854	0	0	0	1	0	0	0	0	1	0.13
O855	0	0	1	2	0	0	0	0	3	0.38
O856	0	4	0	0	0	0	1	0	5	0.63
O861	0	0	0	0	0	0	0	0	0	0
O896	0	0	0	2	0	0	0	0	2	0.25
Total	0	5	2	7	1	1	2	0	18	2.25

Job Series	PROCUREMENT/SUPPLY ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1101	0	0	0	1	0	0	2	0	3	0.38
1102	0	0	2	0	1	0	1	2	6	0.75
1105	3	1	1	0	0	0	0	0	5	0.63
1106	0	1	2	0	1	0	0	1	5	0.63
2005	0	3	2	0	2	0	1	1	9	1.13
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	1	0	0	0	0	0	1	0.13
2102	0	0	0	0	0	2	1	0	3	0.38
2131	0	0	0	0	0	0	0	0	0	0
2132	1	0	0	0	2	0	0	0	3	0.38
2134	0	0	0	0	1	0	0	0	1	0.13
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	4	5	8	1	7	2	5	4	36	4.5
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1101	0	0	0	0	0	0	0	0	0	0
1102	0	0	0	1	0	0	1	6	8	1
1105	0	1	0	0	0	0	0	0	1	0.13
1106	0	0	0	1	0	0	1	1	3	0.38
2005	1	0	0	1	0	1	1	0	4	0.5
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	2	1	1	4	0.5
2131	0	0	0	0	0	0	0	0	0	0
2132	0	0	1	1	0	0	0	0	2	0.25
2134	1	0	0	0	0	0	0	0	1	0.13
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	2	1	1	4	0	3	4	8	23	2.88

Job Series	PROCUREMENT/SUPPLY ACCESSIONS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1101	0	0	0	0	0	0	0	1	1	0.13
1102	0	0	0	0	1	1	1	0	3	0.38
1105	0	0	0	1	0	0	0	0	1	0.13
1106	0	0	0	0	0	1	0	0	1	0.13
2005	0	0	1	2	0	0	2	1	6	0.75
2010	0	0	0	0	0	1	0	0	1	0.13
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	2	0	2	0.25
2131	0	0	0	0	0	0	0	0	0	0
2132	1	0	0	0	0	0	0	0	1	0.13
2134	0	0	0	0	0	0	0	0	0	0
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	3	1	3	5	2	16	2
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1101	0	0	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	1	1	0	2	0.25
1105	1	0	2	0	0	1	0	0	4	0.5
1106	0	0	0	1	2	0	0	0	3	0.38
2005	1	1	0	2	1	1	1	0	7	0.88
2010	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	2	1	0	3	0.38
2131	0	0	0	0	0	0	0	0	0	0
2132	0	1	1	0	0	0	0	0	2	0.25
2134	0	1	1	0	0	0	0	0	2	0.25
2135	0	0	0	0	0	0	0	0	0	0
2150	0	0	1	0	0	0	0	0	1	0.13
Total	2	3	5	3	3	5	3	0	24	3

Job Series	PUBLIC WORKS/STAFF ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1152	1	1	0	0	0	0	2	0	4	0.5
1173	1	0	0	0	0	0	2	0	3	0.38
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	1	0	1	0.13
2151	0	0	0	0	0	0	0	1	1	0.13
Total	2	1	0	0	0	0	5	1	9	1.13
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1152	1	0	2	0	0	0	0	0	3	0.38
1173	0	0	0	1	0	0	1	2	4	0.5
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	1	0	2	1	0	0	1	2	7	0.88
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1152	0	0	0	1	0	0	0	0	1	0.13
1173	0	0	0	0	0	0	0	1	1	0.13
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	1	2	0.25
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1152	0	0	1	0	0	0	2	2	5	0.63
1173	0	0	0	0	0	6	0	0	6	0.75
1601	0	0	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0	0	0
2151	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	6	2	2	11	1.38

Job Series	SCIENCE/TECHNICAL ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1301	0	1	0	0	0	0	1	0	2	0.25
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1311	1	0	0	2	0	1	0	0	4	0.5
1321	0	0	0	0	0	0	0	0	0	0
1340	1	0	1	0	0	0	0	0	2	0.25
1341	0	0	0	0	0	0	0	0	0	0
1360	0	0	1	0	0	1	0	0	2	0.25
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	2	1	2	2	0	2	1	0	10	1.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1301	0	1	0	0	0	0	0	0	1	0.13
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1311	0	0	0	0	0	0	0	0	0	0
1321	0	0	0	0	0	0	0	0	0	0
1340	0	0	0	0	0	0	0	0	0	0
1341	0	0	0	0	0	0	0	0	0	0
1360	0	0	0	2	1	0	1	0	4	0.5
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	1	0	0	0	0	1	2	0.25
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	1	0	1	1	7	0.88

Job Series	SCIENCE/TECHNICAL ACCESSIONS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1301	1	0	0	0	0	0	0	0	1	0.13
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	1	0	1	0.13
1311	2	0	2	0	3	2	1	2	12	1.5
1321	0	0	0	0	0	0	0	0	0	0
1340	0	0	0	0	0	1	0	0	1	0.13
1341	0	0	1	0	0	0	0	0	1	0.13
1360	0	1	1	0	1	1	3	0	7	0.88
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	1	0	1	0	0	0	2	0.25
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	3	1	5	0	5	4	5	2	25	3.13
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1301	0	0	0	0	0	0	0	0	0	0
1306	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	1	1	0.13
1311	1	0	2	1	0	0	0	0	4	0.5
1321	0	0	0	0	0	0	0	0	0	0
1340	0	0	1	0	0	0	1	0	2	0.25
1341	0	1	0	0	0	0	0	0	1	0.13
1360	3	2	0	0	0	0	0	0	5	0.63
1372	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	1	0	1	0.13
1520	0	0	0	1	0	0	0	0	1	0.13
1530	0	0	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0	0	0
Total	4	3	3	2	0	0	2	1	15	1.88

Job Series	LIBRARY ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1410	0	1	0	0	0	1	1	0	3	0.38
1411	0	0	1	2	1	1	1	1	7	0.88
Total	0	1	1	2	1	2	2	1	10	1.25
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1410	2	1	2	1	0	0	0	2	8	1
1411	0	0	3	2	0	0	0	0	5	0.63
Total	2	1	5	3	0	0	0	2	13	1.63
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1410	2	0	1	1	0	1	0	0	5	0.63
1411	0	0	2	0	0	0	1	0	3	0.38
Total	2	0	3	1	0	1	1	0	8	1
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1410	0	0	0	0	0	0	0	0	0	0
1411	0	1	4	1	1	0	0	3	10	1.25
Total	0	1	4	1	1	0	0	3	10	1.25

Job Series	EDUCATION/TRAINING ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1701	0	1	0	1	0	0	0	0	2	0.25
1702	0	0	2	7	1	4	0	2	16	2
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	1	0	1	0.13
Total	0	1	2	8	1	4	1	2	19	2.38
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1701	0	0	0	0	0	0	0	0	0	0
1702	1	0	1	3	1	0	1	1	8	1
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	3	1	0	1	1	8	1
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1701	0	0	0	0	0	0	0	0	0	0
1702	1	0	0	0	0	1	4	1	7	0.88
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	4	1	7	0.88
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
1701	0	0	0	0	0	0	0	0	0	0
1702	0	0	0	2	3	1	0	0	6	0.75
1712	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	3	1	0	0	6	0.75

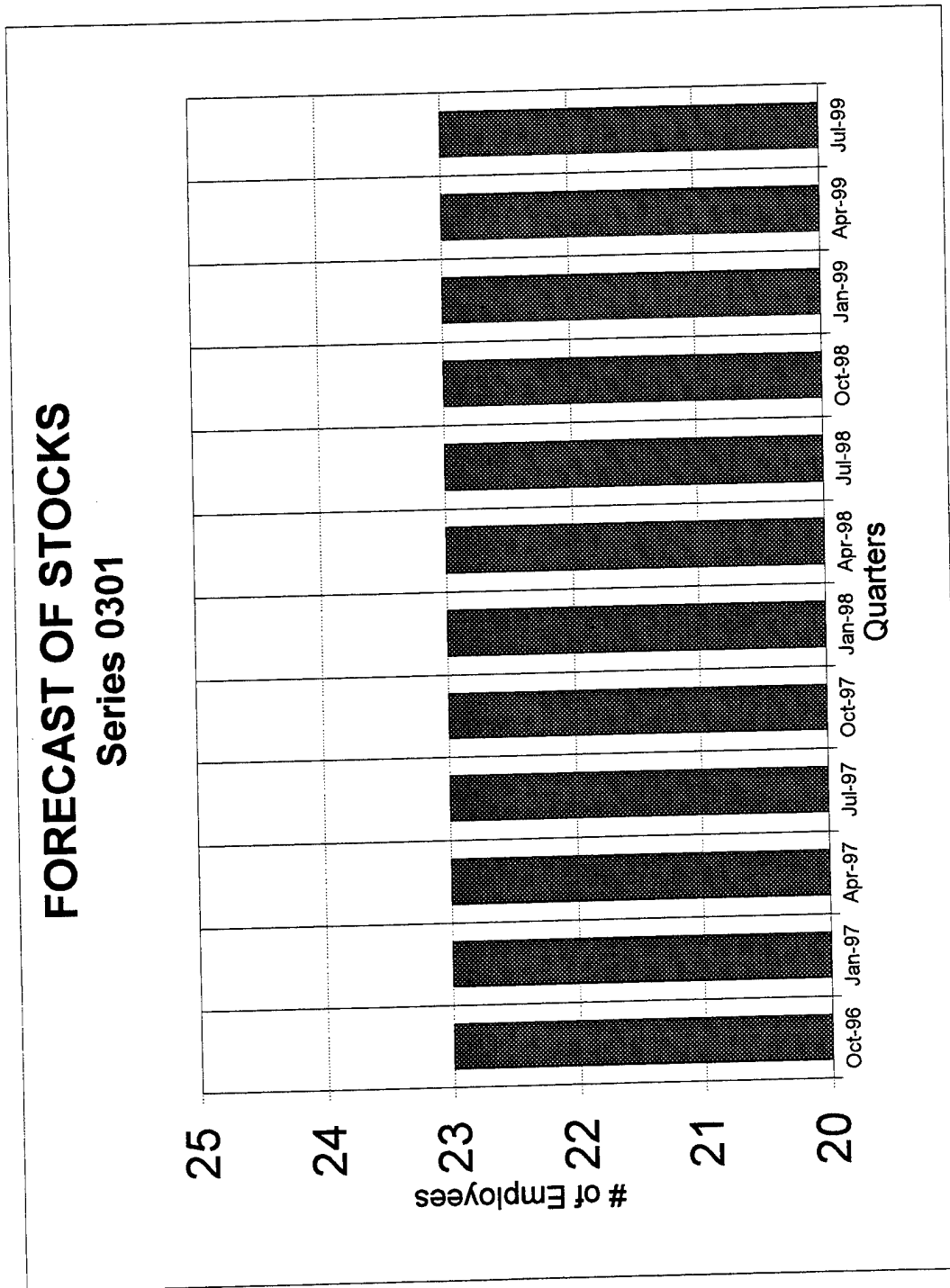
Job Series	WAGE GRADE/SUPERVISORS ACCESSIONS									
Quarter 1	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
2502	0	0	0	2	0	0	0	0	2	0.25
2604	0	0	0	0	0	0	1	0	1	0.13
2608	0	0	0	0	0	0	0	0	0	0
2805	0	0	0	0	0	0	0	0	0	0
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	0	1	0	1	0.13
3502	1	1	0	0	3	0	0	0	5	0.63
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	1	0	1	0.13
4204	0	0	0	0	0	0	0	0	0	0
4206	0	0	0	1	0	0	2	0	3	0.38
4402	0	0	0	0	0	0	0	0	0	0
4417	0	0	0	0	0	0	0	0	0	0
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	2	1	0	0	0	0	0	0	3	0.38
4701	0	0	0	0	1	0	1	2	4	0.5
4714	0	0	0	0	0	0	0	0	0	0
4749	2	1	0	0	0	1	0	1	5	0.63
4801	0	0	0	0	0	0	2	0	2	0.25
4804	0	0	1	0	1	0	2	0	4	0.5
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	0	0	1	0	1	0.13
5026	0	0	0	0	0	0	0	0	0	0
5306	0	1	0	1	0	0	3	0	5	0.63
5309	0	0	0	0	0	0	1	0	1	0.13
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	2	0	0	0	0	0	3	1	6	0.75
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	3	0	0	0	0	0	3	0.38
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	1	0	1	0.13
5803	0	0	0	0	0	0	1	0	1	0.13
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	0	0	0	0	0
6907	0	0	0	2	0	1	3	0	6	0.75
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	7	4	4	6	5	2	23	4	55	6.88

Job Series	WAGE GRADE/SUPERVISORS ACCESSIONS									
Quarter 2	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
2502	1	0	0	0	0	0	0	0	1	0.13
2604	0	0	0	0	0	0	0	0	0	0
2608	0	0	0	0	0	0	0	0	0	0
2805	1	0	0	0	0	0	0	2	3	0.38
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	0	0	0	0	0
3502	1	0	0	0	1	3	0	0	5	0.63
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0	0	0
4204	0	0	1	1	0	0	0	0	2	0.25
4206	1	0	0	0	0	0	0	0	1	0.13
4402	0	0	0	0	0	0	0	0	0	0
4417	0	0	0	0	0	0	0	0	0	0
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	1	0	0	0	2	0	0	0	3	0.38
4701	0	0	0	0	0	1	1	1	3	0.38
4714	0	0	0	0	0	0	0	0	0	0
4749	0	0	0	0	1	0	2	2	5	0.63
4801	0	0	0	0	0	1	0	0	1	0.13
4804	0	0	0	0	0	0	0	1	1	0.13
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	1	0	0	0	1	0.13
5026	0	0	0	0	0	0	0	0	0	0
5306	0	0	0	0	0	1	0	0	1	0.13
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	1	0	0	0	1	0	1	0	3	0.38
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	1	0	0	0	0	1	0.13
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	0	0	0	0	0
6907	0	0	0	0	0	0	0	0	0	0
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	6	0	1	2	6	6	4	6	31	3.88

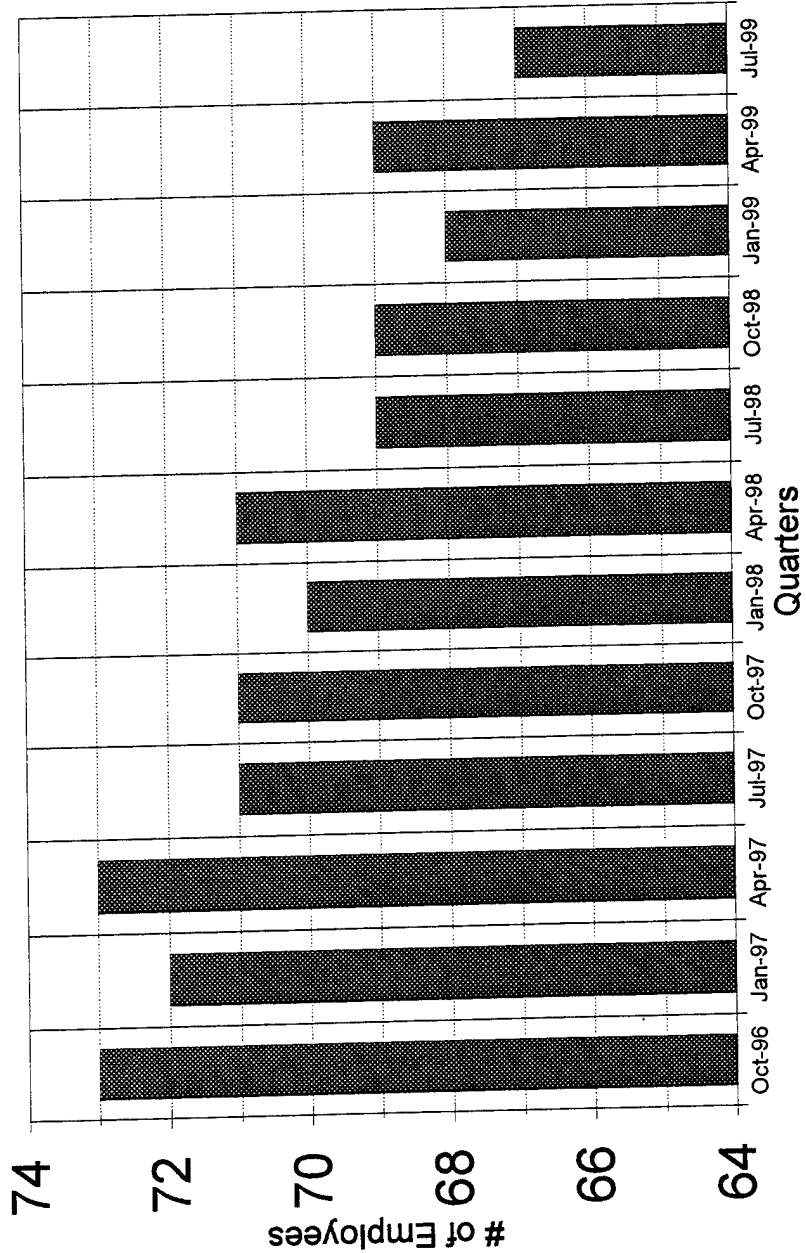
Job Series	WAGE GRADE/SUPERVISORS ACCESSIONS									
Quarter 3	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
2502	1	0	0	0	0	0	0	0	1	0.13
2604	0	0	0	0	0	0	0	0	0	0
2608	0	0	0	0	0	0	0	0	0	0
2805	0	0	1	0	1	1	0	0	3	0.38
2810	0	0	0	0	0	0	0	0	0	0
3414	0	0	0	0	0	1	0	0	1	0.13
3502	0	2	2	2	6	1	4	0	17	2.13
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0	0	0
4204	0	0	0	0	0	1	0	0	1	0.13
4206	0	0	0	0	0	0	1	0	1	0.13
4402	0	0	0	0	0	0	0	0	0	0
4417	0	0	0	0	0	0	0	0	0	0
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	0	0	1	2	0	0	0	1	4	0.5
4701	1	0	0	0	0	1	0	0	2	0.25
4714	0	0	0	0	0	0	1	0	1	0.13
4749	1	0	0	2	4	2	1	3	13	1.63
4801	0	0	0	0	0	0	0	0	0	0
4804	0	0	0	0	0	0	0	0	0	0
5001	0	0	0	0	0	1	0	0	1	0.13
5003	0	0	0	0	0	0	0	0	0	0
5026	0	0	0	0	0	0	0	0	0	0
5306	0	0	0	0	0	0	0	0	0	0
5309	0	0	0	0	0	0	0	0	0	0
5313	0	0	0	0	0	0	0	0	0	0
5378	0	0	0	0	0	0	0	0	0	0
5402	1	0	0	0	0	0	0	0	1	0.13
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	1	1	0	0	0	2	0.25
5705	0	0	0	0	0	0	0	0	0	0
5716	0	0	0	0	0	0	0	0	0	0
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	1	0	0	1	0.13
6907	0	0	1	0	0	0	0	0	1	0.13
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	0	0	0
7002	0	0	0	0	0	0	0	0	0	0
Total	4	2	5	7	12	9	7	4	50	6.25

Job Series	WAGE GRADE/SUPERVISORS ACCESSIONS									
Quarter 4	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	Accessions Totals	Avg Accessions
2502	0	0	0	0	0	0	0	0	0	0
2604	0	0	0	0	0	0	0	0	0	0
2608	0	0	0	0	0	0	0	0	0	0
2805	1	0	0	1	0	4	1	0	7	0.88
2810	0	0	0	0	0	3	0	0	3	0.38
3414	0	0	0	1	0	0	0	0	1	0.13
3502	0	0	1	1	5	3	0	0	10	1.25
3604	0	0	0	0	0	0	0	0	0	0
3703	0	0	0	0	0	1	0	0	1	0.13
4102	0	0	0	0	0	0	1	0	1	0.13
4204	0	0	0	0	0	6	0	0	6	0.75
4206	0	0	1	0	0	2	1	0	4	0.5
4402	0	0	0	0	0	0	0	0	0	0
4417	1	0	0	0	0	0	0	0	1	0.13
4604	0	0	0	0	0	0	0	0	0	0
4605	0	0	0	0	0	0	0	0	0	0
4607	0	1	0	0	0	1	1	0	3	0.38
4701	0	0	0	0	0	5	2	1	8	1
4714	0	0	0	0	0	0	0	0	0	0
4749	0	1	0	1	2	4	5	0	13	1.63
4801	0	0	0	0	0	1	0	0	1	0.13
4804	0	0	0	0	1	0	0	0	1	0.13
5001	0	0	0	0	0	0	0	0	0	0
5003	0	0	0	0	0	0	1	0	1	0.13
5026	0	0	0	0	0	0	0	0	0	0
5306	0	1	0	0	0	0	1	0	2	0.25
5309	0	0	0	0	0	0	0	0	0	0
5313	0	1	0	0	0	0	0	0	1	0.13
5378	0	0	0	0	0	0	0	0	0	0
5402	1	0	0	0	0	0	1	4	6	0.75
5409	0	0	0	0	0	0	0	0	0	0
5703	0	0	0	0	0	0	0	0	0	0
5705	0	0	0	0	0	1	0	0	1	0.13
5716	0	0	0	0	0	1	0	0	1	0.13
5803	0	0	0	0	0	0	0	0	0	0
5806	0	0	0	0	0	0	0	0	0	0
5823	0	0	0	0	0	2	0	0	2	0.25
6907	0	0	0	1	0	0	0	0	1	0.13
6910	0	0	0	0	0	0	0	0	0	0
6912	0	0	0	0	0	0	0	1	1	0.13
7002	0	0	0	0	0	0	0	0	0	0
Total	3	4	2	5	8	34	14	6	76	9.5

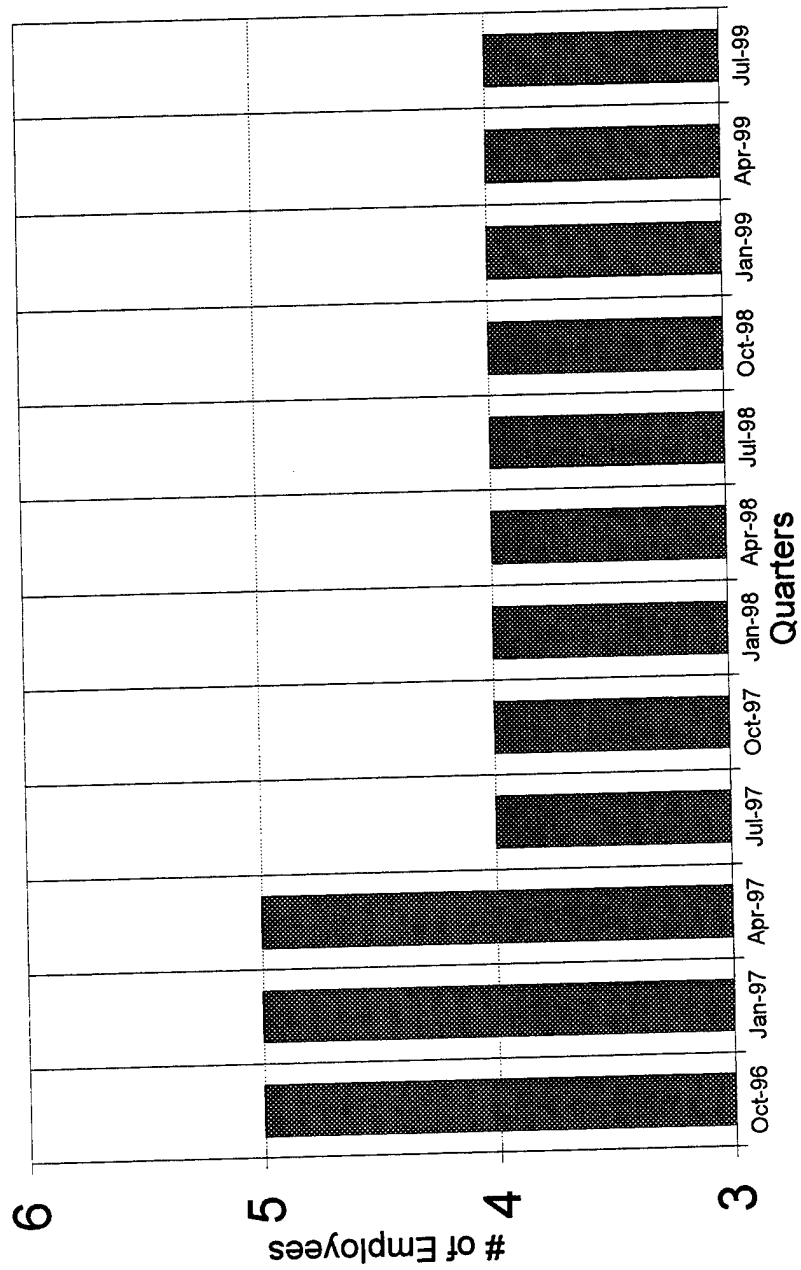
APPENDIX F. FORECAST OF STOCKS FOR UNGROUPED SERIES



FORECAST OF STOCKS **Series 0303**

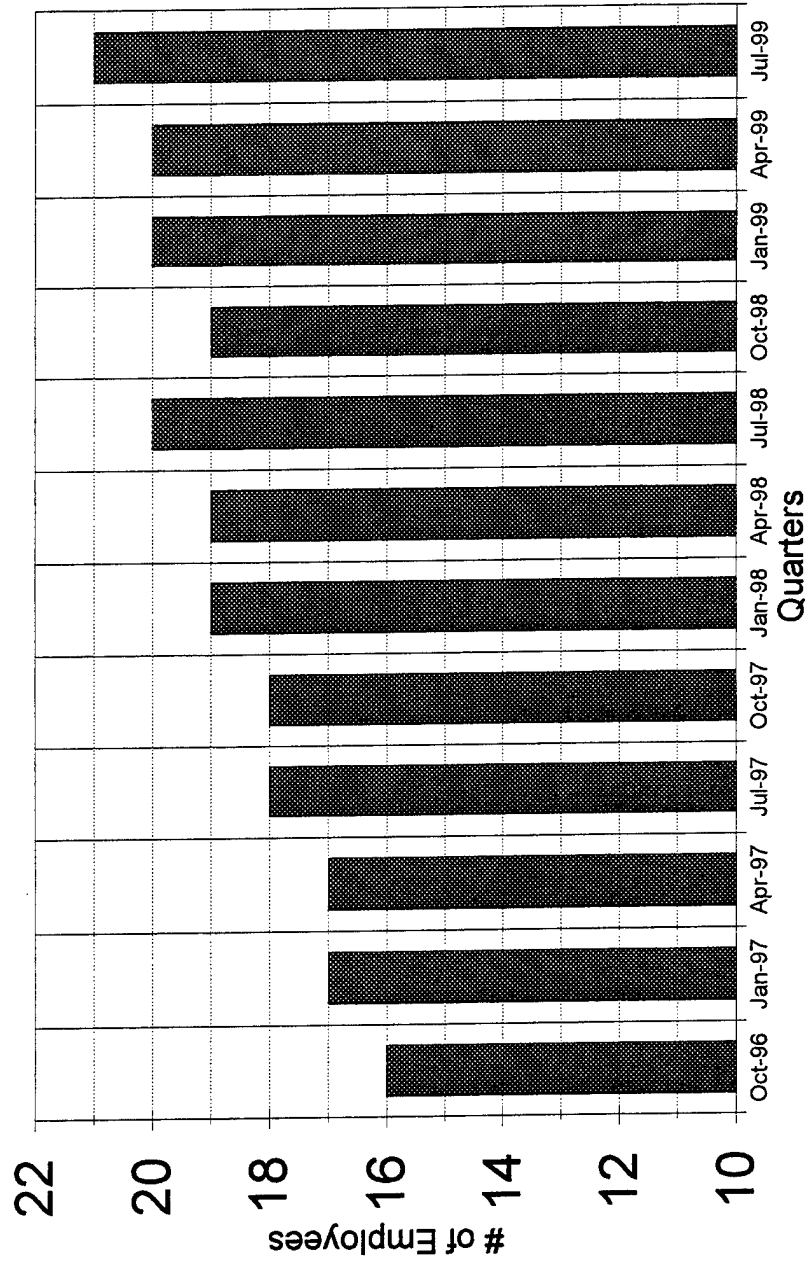


FORECAST OF STOCKS **Series 0305**

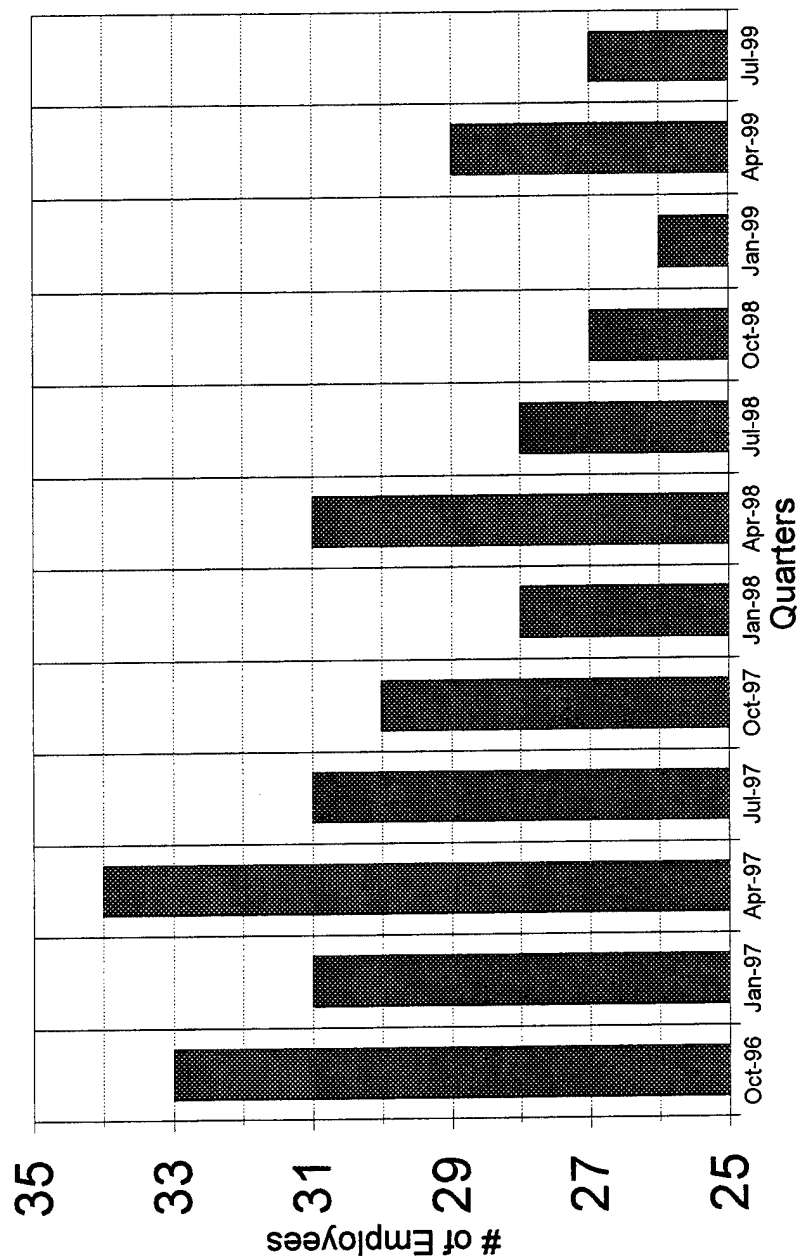


FORECAST OF STOCKS

Series 0138



FORECAST OF STOCKS **Series 0326**



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